AP - 111

AGWMR (3)

2018

APPENDIX H
GROUNDWATER ANALYTICAL DATA
(ON ATTACHED CD)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 19, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling OW OrderNo.: 1802C47

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/22/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.8	0.63	1.0		mg/L	1	2/28/2018 4:47:41 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 4:47:41 PM	36750
Surr: DNOP	113	0	77.5-161		%Rec	1	2/28/2018 4:47:41 PM	36750
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	3/9/2018 4:46:19 PM	R49685
Chloride	150	5.0	10		mg/L	20	3/9/2018 4:59:11 PM	R49685
Bromide	2.0	0.073	0.50		mg/L	5	3/9/2018 4:46:19 PM	R49685
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	3/9/2018 4:46:19 PM	R49685
Sulfate	1.2	0.48	2.5	J	mg/L	5	3/9/2018 4:46:19 PM	R49685
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	3/9/2018 5:37:47 PM	R49685
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.5	0.0049	0.010	*	mg/L	5	3/9/2018 5:36:37 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:32:09 PM	A49680
Calcium	110	0.39	5.0		mg/L	5	3/12/2018 10:00:06 PM	A49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:32:09 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:32:09 PM	A49680
Iron	2.6	0.082	0.10	*	mg/L	5	3/12/2018 10:00:06 PM	A49712
Magnesium	17	0.25	1.0		mg/L	1	3/9/2018 4:32:09 PM	A49680
Manganese	2.1	0.0020	0.010	*	mg/L	5	3/9/2018 5:36:37 PM	A49680
Potassium	1.1	0.11	1.0		mg/L	1	3/9/2018 4:32:09 PM	A49680
Silver	0.0031	0.0018	0.0050	J	mg/L	1	3/12/2018 9:58:15 PM	A49712
Sodium	290	0.82	5.0		mg/L	5	3/9/2018 5:36:37 PM	A49680
Zinc	0.0063	0.0021	0.010	J	mg/L	1	3/13/2018 6:08:43 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	3.7	0.0050	0.010	*	mg/L	5	3/8/2018 2:48:20 PM	36876
Cadmium	ND	0.00058	0.0020		mg/L	1	3/8/2018 12:35:03 PM	36876
Chromium	ND	0.0018	0.0060		mg/L	1	3/8/2018 12:35:03 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:35:03 PM	36876
Iron	5.3	0.10	0.20	*	mg/L	10	3/8/2018 2:00:56 PM	36876
Manganese	2.5	0.0055	0.010	*	mg/L	5	3/8/2018 2:48:20 PM	36876
Silver	0.0021	0.0012	0.0050	J	mg/L	1	3/8/2018 2:36:59 PM	36876
Zinc	ND	0.0033	0.010		mg/L	1	3/8/2018 12:35:03 PM	36876
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0045	0.0021	0.0050	J	mg/L	5	3/7/2018 9:23:27 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:05:52 PM	C49567
Selenium	0.0047	0.0038	0.0050	J	mg/L	5	3/7/2018 9:23:27 PM	C49633
Uranium	0.00062	0.000096	0.00050		mg/L	1	3/5/2018 10:05:52 PM	C49567

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0041	0.010		mg/L	10	3/13/2018 11:22:47 AM	36876
Lead	0.0016	0.0011	0.0025	J	mg/L	5	3/9/2018 1:50:18 PM	36876
Selenium	ND	0.0098	0.010		mg/L	10	3/13/2018 11:22:47 AM	36876
Uranium	0.00069	0.00034	0.0025	J	mg/L	5	3/9/2018 1:50:18 PM	36876
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000081	0.000037	0.00020	J	mg/L	1	3/7/2018 1:17:25 PM	36861
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.3	3.6	10	J	µg/L	1	3/2/2018 1:28:37 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzoic acid	43	3.9	20		µg/L	1	3/2/2018 1:28:37 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 1:28:37 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 1:28:37 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 1:28:37 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 1:28:37 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Fluorene	6.0	4.0	10	J	µg/L	1	3/2/2018 1:28:37 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 1:28:37 PM	36704
1-Methylnaphthalene	98	3.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Methylnaphthalene	29	3.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 1:28:37 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Naphthalene	73	2.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 1:28:37 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 1:28:37 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 1:28:37 PM	36704
Phenanthrene	6.3	4.3	10	J	µg/L	1	3/2/2018 1:28:37 PM	36704
Phenol	67	3.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 1:28:37 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 1:28:37 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 1:28:37 PM	36704
Surr: 2-Fluorophenol	49.9	0	15-114		%Rec	1	3/2/2018 1:28:37 PM	36704
Surr: Phenol-d5	37.3	0	15-97.9		%Rec	1	3/2/2018 1:28:37 PM	36704
Surr: 2,4,6-Tribromophenol	74.8	0	15-161		%Rec	1	3/2/2018 1:28:37 PM	36704
Surr: Nitrobenzene-d5	66.9	0	29.3-120		%Rec	1	3/2/2018 1:28:37 PM	36704
Surr: 2-Fluorobiphenyl	63.9	0	17.5-116		%Rec	1	3/2/2018 1:28:37 PM	36704
Surr: 4-Terphenyl-d14	46.4	0	21-92.2		%Rec	1	3/2/2018 1:28:37 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	12000	31	500		µg/L	500	2/27/2018 5:01:30 PM	W49433
Toluene	35	3.2	50	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
Ethylbenzene	580	4.7	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Methyl tert-butyl ether (MTBE)	120	12	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2,4-Trimethylbenzene	ND	5.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,3,5-Trimethylbenzene	ND	4.4	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Naphthalene	120	5.7	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
1-Methylnaphthalene	90	8.0	200	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
2-Methylnaphthalene	33	7.6	200	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
Acetone	97	41	500	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
Bromobenzene	ND	7.0	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Bromodichloromethane	ND	8.8	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Bromoform	ND	11	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Bromomethane	ND	13	150		µg/L	50	2/27/2018 5:30:54 PM	W49433
2-Butanone	ND	57	500		µg/L	50	2/27/2018 5:30:54 PM	W49433
Carbon disulfide	ND	20	500		µg/L	50	2/27/2018 5:30:54 PM	W49433
Carbon Tetrachloride	ND	5.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Chlorobenzene	ND	5.3	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Chloroethane	ND	12	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
Chloroform	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Chloromethane	ND	15	150		µg/L	50	2/27/2018 5:30:54 PM	W49433
2-Chlorotoluene	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
4-Chlorotoluene	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
cis-1,2-DCE	ND	10	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
Dibromochloromethane	ND	3.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Dibromomethane	ND	4.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,4-Dichlorobenzene	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Dichlorodifluoromethane	ND	50	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1-Dichloroethane	ND	20	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1-Dichloroethene	ND	4.0	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2-Dichloropropane	ND	5.1	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,3-Dichloropropane	ND	8.4	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
2,2-Dichloropropane	ND	7.9	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1-Dichloropropene	ND	4.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Hexachlorobutadiene	ND	40	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
2-Hexanone	ND	33	500		µg/L	50	2/27/2018 5:30:54 PM	W49433
Isopropylbenzene	15	2.6	50	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
4-Isopropyltoluene	ND	4.8	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
4-Methyl-2-pentanone	ND	35	500		µg/L	50	2/27/2018 5:30:54 PM	W49433
Methylene Chloride	ND	5.4	150		µg/L	50	2/27/2018 5:30:54 PM	W49433
n-Butylbenzene	7.6	6.5	150	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
n-Propylbenzene	45	3.7	50	J	µg/L	50	2/27/2018 5:30:54 PM	W49433
sec-Butylbenzene	ND	5.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Styrene	ND	7.8	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
tert-Butylbenzene	ND	5.2	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
trans-1,2-DCE	ND	9.2	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Trichlorofluoromethane	ND	9.1	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
1,2,3-Trichloropropane	ND	19	100		µg/L	50	2/27/2018 5:30:54 PM	W49433
Vinyl chloride	ND	8.9	50		µg/L	50	2/27/2018 5:30:54 PM	W49433
Xylenes, Total	110	16	75		µg/L	50	2/27/2018 5:30:54 PM	W49433
Surr: 1,2-Dichloroethane-d4	98.9	0	70-130		%Rec	50	2/27/2018 5:30:54 PM	W49433
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	50	2/27/2018 5:30:54 PM	W49433
Surr: Dibromofluoromethane	103	0	70-130		%Rec	50	2/27/2018 5:30:54 PM	W49433
Surr: Toluene-d8	99.5	0	70-130		%Rec	50	2/27/2018 5:30:54 PM	W49433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 10:05:00 AM
Lab ID: 1802C47-001
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	28	0.97	5.0		mg/L	100	2/23/2018 2:30:46 PM	W49345
Surr: BFB	116	0	70-130		%Rec	100	2/23/2018 2:30:46 PM	W49345

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 11:00:00 AM
Lab ID: 1802C47-002
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.9	0.63	1.0		mg/L	1	2/28/2018 6:09:08 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 6:09:08 PM	36750
Surr: DNOP	109	0	77.5-161		%Rec	1	2/28/2018 6:09:08 PM	36750
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	42000	62	1000		µg/L	1000	2/27/2018 6:59:06 PM	W49433
Toluene	3700	6.4	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Ethylbenzene	1500	9.3	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Methyl tert-butyl ether (MTBE)	1200	24	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2,4-Trimethylbenzene	320	11	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,3,5-Trimethylbenzene	38	8.7	100	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Naphthalene	140	11	200	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
1-Methylnaphthalene	76	16	400	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
2-Methylnaphthalene	53	15	400	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
Acetone	ND	82	1000		µg/L	100	2/27/2018 7:28:29 PM	W49433
Bromobenzene	ND	14	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Bromodichloromethane	ND	18	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Bromoform	ND	21	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Bromomethane	ND	26	300		µg/L	100	2/27/2018 7:28:29 PM	W49433
2-Butanone	ND	110	1000		µg/L	100	2/27/2018 7:28:29 PM	W49433
Carbon disulfide	ND	40	1000		µg/L	100	2/27/2018 7:28:29 PM	W49433
Carbon Tetrachloride	ND	11	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Chlorobenzene	ND	11	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Chloroethane	ND	23	200		µg/L	100	2/27/2018 7:28:29 PM	W49433
Chloroform	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Chloromethane	ND	29	300		µg/L	100	2/27/2018 7:28:29 PM	W49433
2-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
4-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
cis-1,2-DCE	ND	20	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	2/27/2018 7:28:29 PM	W49433
Dibromochloromethane	ND	7.2	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Dibromomethane	ND	9.1	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,3-Dichlorobenzene	ND	15	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,4-Dichlorobenzene	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Dichlorodifluoromethane	ND	100	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1-Dichloroethane	ND	40	100		µg/L	100	2/27/2018 7:28:29 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 11:00:00 AM
Lab ID: 1802C47-002 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	8.1	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2-Dichloropropane	ND	10	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,3-Dichloropropane	ND	17	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
2,2-Dichloropropane	ND	16	200		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1-Dichloropropene	ND	9.3	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Hexachlorobutadiene	ND	80	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
2-Hexanone	ND	66	1000		µg/L	100	2/27/2018 7:28:29 PM	W49433
Isopropylbenzene	19	5.1	100	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
4-Isopropyltoluene	ND	9.6	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	2/27/2018 7:28:29 PM	W49433
Methylene Chloride	ND	11	300		µg/L	100	2/27/2018 7:28:29 PM	W49433
n-Butylbenzene	14	13	300	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
n-Propylbenzene	59	7.4	100	J	µg/L	100	2/27/2018 7:28:29 PM	W49433
sec-Butylbenzene	ND	11	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Styrene	ND	16	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
tert-Butylbenzene	ND	10	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	2/27/2018 7:28:29 PM	W49433
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
trans-1,2-DCE	ND	18	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,1,2-Trichloroethane	ND	14	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Trichloroethene (TCE)	ND	11	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Trichlorofluoromethane	ND	18	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
1,2,3-Trichloropropane	ND	39	200		µg/L	100	2/27/2018 7:28:29 PM	W49433
Vinyl chloride	ND	18	100		µg/L	100	2/27/2018 7:28:29 PM	W49433
Xylenes, Total	3800	32	150		µg/L	100	2/27/2018 7:28:29 PM	W49433
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	100	2/27/2018 7:28:29 PM	W49433
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	100	2/27/2018 7:28:29 PM	W49433
Surr: Dibromofluoromethane	107	0	70-130		%Rec	100	2/27/2018 7:28:29 PM	W49433
Surr: Toluene-d8	98.1	0	70-130		%Rec	100	2/27/2018 7:28:29 PM	W49433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	120	1.9	10		mg/L	200	2/23/2018 2:53:46 PM	W49345
Surr: BFB	114	0	70-130		%Rec	200	2/23/2018 2:53:46 PM	W49345

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.7	0.63	1.0		mg/L	1	2/28/2018 6:36:11 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 6:36:11 PM	36750
Surr: DNOP	113	0	77.5-161		%Rec	1	2/28/2018 6:36:11 PM	36750
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	3/9/2018 5:12:04 PM	R49685
Chloride	140	5.0	10		mg/L	20	3/9/2018 5:24:55 PM	R49685
Bromide	1.8	0.073	0.50		mg/L	5	3/9/2018 5:12:04 PM	R49685
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	3/9/2018 5:12:04 PM	R49685
Sulfate	0.53	0.48	2.5	J	mg/L	5	3/9/2018 5:12:04 PM	R49685
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	3/9/2018 5:50:39 PM	R49685
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.9	0.0049	0.010	*	mg/L	5	3/9/2018 5:38:51 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:34:00 PM	A49680
Calcium	120	0.78	10		mg/L	10	3/12/2018 10:04:14 PM	A49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:34:00 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:34:00 PM	A49680
Iron	7.1	0.16	0.20	*	mg/L	10	3/12/2018 10:04:14 PM	A49712
Magnesium	35	0.25	1.0		mg/L	1	3/9/2018 4:34:00 PM	A49680
Manganese	1.9	0.0020	0.010	*	mg/L	5	3/9/2018 5:38:51 PM	A49680
Potassium	0.36	0.11	1.0	J	mg/L	1	3/9/2018 4:34:00 PM	A49680
Silver	0.0026	0.0018	0.0050	J	mg/L	1	3/12/2018 10:02:20 PM	A49712
Sodium	260	0.82	5.0		mg/L	5	3/9/2018 5:38:51 PM	A49680
Zinc	0.0058	0.0021	0.010	J	mg/L	1	3/13/2018 6:10:17 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.3	0.0050	0.010	*	mg/L	5	3/8/2018 2:52:14 PM	36876
Cadmium	ND	0.00058	0.0020		mg/L	1	3/8/2018 12:36:55 PM	36876
Chromium	0.0022	0.0018	0.0060	J	mg/L	1	3/8/2018 12:36:55 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:36:55 PM	36876
Iron	11	0.20	0.40	*	mg/L	20	3/8/2018 2:03:00 PM	36876
Manganese	2.3	0.0055	0.010	*	mg/L	5	3/8/2018 2:52:14 PM	36876
Silver	0.0014	0.0012	0.0050	J	mg/L	1	3/8/2018 2:50:21 PM	36876
Zinc	0.012	0.0033	0.010		mg/L	1	3/8/2018 12:36:55 PM	36876
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	3/7/2018 9:37:55 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:20:19 PM	C49567
Selenium	0.0049	0.0038	0.0050	J	mg/L	5	3/7/2018 9:37:55 PM	C49633
Uranium	0.00022	0.000096	0.00050	J	mg/L	1	3/5/2018 10:20:19 PM	C49567

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0043	0.0041	0.010	J	mg/L	10	3/13/2018 11:27:47 AM	36876
Lead	0.0042	0.0011	0.0025		mg/L	5	3/9/2018 1:55:13 PM	36876
Selenium	ND	0.0098	0.010		mg/L	10	3/13/2018 11:27:47 AM	36876
Uranium	0.00061	0.00034	0.0025	J	mg/L	5	3/9/2018 1:55:13 PM	36876
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/7/2018 1:19:47 PM	36861
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzoic acid	23	3.9	20		µg/L	1	3/2/2018 1:56:40 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 1:56:40 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Dimethyl phthalate	3.7	3.6	10	J	µg/L	1	3/2/2018 1:56:40 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 1:56:40 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 1:56:40 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 1:56:40 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Fluorene	4.9	4.0	10	J	µg/L	1	3/2/2018 1:56:40 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 1:56:40 PM	36704
1-Methylnaphthalene	90	3.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Methylnaphthalene	68	3.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
3+4-Methylphenol	5.7	3.2	10	J	µg/L	1	3/2/2018 1:56:40 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Naphthalene	120	2.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 1:56:40 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 1:56:40 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 1:56:40 PM	36704
Phenanthrene	4.8	4.3	10	J	µg/L	1	3/2/2018 1:56:40 PM	36704
Phenol	52	3.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 1:56:40 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 1:56:40 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 1:56:40 PM	36704
Surr: 2-Fluorophenol	52.6	0	15-114		%Rec	1	3/2/2018 1:56:40 PM	36704
Surr: Phenol-d5	43.3	0	15-97.9		%Rec	1	3/2/2018 1:56:40 PM	36704
Surr: 2,4,6-Tribromophenol	80.6	0	15-161		%Rec	1	3/2/2018 1:56:40 PM	36704
Surr: Nitrobenzene-d5	78.1	0	29.3-120		%Rec	1	3/2/2018 1:56:40 PM	36704
Surr: 2-Fluorobiphenyl	74.0	0	17.5-116		%Rec	1	3/2/2018 1:56:40 PM	36704
Surr: 4-Terphenyl-d14	46.2	0	21-92.2		%Rec	1	3/2/2018 1:56:40 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	33000	62	1000		µg/L	1000	2/27/2018 7:57:34 PM	W49433
Toluene	53	6.4	100	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
Ethylbenzene	1200	9.3	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Methyl tert-butyl ether (MTBE)	2900	24	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2,4-Trimethylbenzene	23	11	100	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
1,3,5-Trimethylbenzene	ND	8.7	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Naphthalene	170	11	200	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
1-Methylnaphthalene	95	16	400	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
2-Methylnaphthalene	73	15	400	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
Acetone	ND	82	1000		µg/L	100	2/27/2018 8:26:43 PM	W49433
Bromobenzene	ND	14	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Bromodichloromethane	ND	18	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Bromoform	ND	21	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Bromomethane	ND	26	300		µg/L	100	2/27/2018 8:26:43 PM	W49433
2-Butanone	ND	110	1000		µg/L	100	2/27/2018 8:26:43 PM	W49433
Carbon disulfide	ND	40	1000		µg/L	100	2/27/2018 8:26:43 PM	W49433
Carbon Tetrachloride	ND	11	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Chlorobenzene	ND	11	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Chloroethane	ND	23	200		µg/L	100	2/27/2018 8:26:43 PM	W49433
Chloroform	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Chloromethane	ND	29	300		µg/L	100	2/27/2018 8:26:43 PM	W49433
2-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
4-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
cis-1,2-DCE	ND	20	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	2/27/2018 8:26:43 PM	W49433
Dibromochloromethane	ND	7.2	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Dibromomethane	ND	9.1	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	2/27/2018 8:26:43 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	15	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,4-Dichlorobenzene	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Dichlorodifluoromethane	ND	100	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1-Dichloroethane	ND	40	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1-Dichloroethene	ND	8.1	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2-Dichloropropane	ND	10	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,3-Dichloropropane	ND	17	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
2,2-Dichloropropane	ND	16	200		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1-Dichloropropene	ND	9.3	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Hexachlorobutadiene	ND	80	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
2-Hexanone	ND	66	1000		µg/L	100	2/27/2018 8:26:43 PM	W49433
Isopropylbenzene	29	5.1	100	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
4-Isopropyltoluene	ND	9.6	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	2/27/2018 8:26:43 PM	W49433
Methylene Chloride	ND	11	300		µg/L	100	2/27/2018 8:26:43 PM	W49433
n-Butylbenzene	16	13	300	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
n-Propylbenzene	95	7.4	100	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
sec-Butylbenzene	ND	11	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Styrene	ND	16	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
tert-Butylbenzene	ND	10	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	2/27/2018 8:26:43 PM	W49433
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
trans-1,2-DCE	ND	18	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,1,2-Trichloroethane	ND	14	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Trichloroethene (TCE)	ND	11	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Trichlorofluoromethane	ND	18	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
1,2,3-Trichloropropane	ND	39	200		µg/L	100	2/27/2018 8:26:43 PM	W49433
Vinyl chloride	ND	18	100		µg/L	100	2/27/2018 8:26:43 PM	W49433
Xylenes, Total	130	32	150	J	µg/L	100	2/27/2018 8:26:43 PM	W49433
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	100	2/27/2018 8:26:43 PM	W49433
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	100	2/27/2018 8:26:43 PM	W49433
Surr: Dibromofluoromethane	108	0	70-130		%Rec	100	2/27/2018 8:26:43 PM	W49433
Surr: Toluene-d8	98.8	0	70-130		%Rec	100	2/27/2018 8:26:43 PM	W49433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018 1:00:00 PM
Lab ID: 1802C47-003
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	77	1.9	10		mg/L	200	2/23/2018 3:16:48 PM	W49345
Surr: BFB	117	0	70-130		%Rec	200	2/23/2018 3:16:48 PM	W49345

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018
Lab ID: 1802C47-004
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.0	0.63	1.0		mg/L	1	2/28/2018 7:03:00 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 7:03:00 PM	36750
Surr: DNOP	111	0	77.5-161		%Rec	1	2/28/2018 7:03:00 PM	36750
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	43000	62	1000		µg/L	1000	2/27/2018 10:53:49 PM	W49433
Toluene	3800	6.4	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Ethylbenzene	1500	9.3	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Methyl tert-butyl ether (MTBE)	1300	24	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2,4-Trimethylbenzene	310	11	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,3,5-Trimethylbenzene	38	8.7	100	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Naphthalene	140	11	200	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
1-Methylnaphthalene	79	16	400	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
2-Methylnaphthalene	53	15	400	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
Acetone	110	82	1000	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
Bromobenzene	ND	14	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Bromodichloromethane	ND	18	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Bromoform	ND	21	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Bromomethane	ND	26	300		µg/L	100	2/27/2018 8:56:12 PM	W49433
2-Butanone	ND	110	1000		µg/L	100	2/27/2018 8:56:12 PM	W49433
Carbon disulfide	ND	40	1000		µg/L	100	2/27/2018 8:56:12 PM	W49433
Carbon Tetrachloride	ND	11	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Chlorobenzene	ND	11	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Chloroethane	ND	23	200		µg/L	100	2/27/2018 8:56:12 PM	W49433
Chloroform	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Chloromethane	ND	29	300		µg/L	100	2/27/2018 8:56:12 PM	W49433
2-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
4-Chlorotoluene	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
cis-1,2-DCE	ND	20	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	2/27/2018 8:56:12 PM	W49433
Dibromochloromethane	ND	7.2	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Dibromomethane	ND	9.1	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,3-Dichlorobenzene	ND	15	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,4-Dichlorobenzene	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Dichlorodifluoromethane	ND	100	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1-Dichloroethane	ND	40	100		µg/L	100	2/27/2018 8:56:12 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/20/2018
Lab ID: 1802C47-004
Matrix: AQUEOUS
Received Date: 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	8.1	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2-Dichloropropane	ND	10	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,3-Dichloropropane	ND	17	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
2,2-Dichloropropane	ND	16	200		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1-Dichloropropene	ND	9.3	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Hexachlorobutadiene	ND	80	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
2-Hexanone	ND	66	1000		µg/L	100	2/27/2018 8:56:12 PM	W49433
Isopropylbenzene	19	5.1	100	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
4-Isopropyltoluene	ND	9.6	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	2/27/2018 8:56:12 PM	W49433
Methylene Chloride	ND	11	300		µg/L	100	2/27/2018 8:56:12 PM	W49433
n-Butylbenzene	15	13	300	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
n-Propylbenzene	57	7.4	100	J	µg/L	100	2/27/2018 8:56:12 PM	W49433
sec-Butylbenzene	ND	11	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Styrene	ND	16	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
tert-Butylbenzene	ND	10	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	2/27/2018 8:56:12 PM	W49433
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
trans-1,2-DCE	ND	18	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,1,2-Trichloroethane	ND	14	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Trichloroethene (TCE)	ND	11	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Trichlorofluoromethane	ND	18	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
1,2,3-Trichloropropane	ND	39	200		µg/L	100	2/27/2018 8:56:12 PM	W49433
Vinyl chloride	ND	18	100		µg/L	100	2/27/2018 8:56:12 PM	W49433
Xylenes, Total	4000	32	150		µg/L	100	2/27/2018 8:56:12 PM	W49433
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	100	2/27/2018 8:56:12 PM	W49433
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	100	2/27/2018 8:56:12 PM	W49433
Surr: Dibromofluoromethane	108	0	70-130		%Rec	100	2/27/2018 8:56:12 PM	W49433
Surr: Toluene-d8	100	0	70-130		%Rec	100	2/27/2018 8:56:12 PM	W49433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	110	1.9	10		mg/L	200	2/23/2018 3:39:43 PM	W49345
Surr: BFB	113	0	70-130		%Rec	200	2/23/2018 3:39:43 PM	W49345

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802C47-005 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Toluene	ND	0.064	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Acetone	ND	0.82	10		µg/L	1	2/27/2018 4:31:54 PM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/27/2018 4:31:54 PM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/27/2018 4:31:54 PM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802C47-005 **Matrix:** AQUEOUS **Received Date:** 2/22/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/27/2018 4:31:54 PM	W49433
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/27/2018 4:31:54 PM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/27/2018 4:31:54 PM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/27/2018 4:31:54 PM	W49433
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	2/27/2018 4:31:54 PM	W49433
Surr: 4-Bromofluorobenzene	118	0	70-130		%Rec	1	2/27/2018 4:31:54 PM	W49433
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	2/27/2018 4:31:54 PM	W49433
Surr: Toluene-d8	101	0	70-130		%Rec	1	2/27/2018 4:31:54 PM	W49433
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/23/2018 4:25:44 PM	W49345
Surr: BFB	117	0	70-130		%Rec	1	2/23/2018 4:25:44 PM	W49345

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607276** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0013	0.0020	0.002000	0	65.0	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0068	0.0060	0.006000	0	113	50	150			
Magnesium	0.47	1.0	0.5000	0	93.8	50	150			J
Manganese	0.0017	0.0020	0.002000	0	86.0	50	150			J
Potassium	0.49	1.0	0.5000	0	97.5	50	150			J
Sodium	0.49	1.0	0.5000	0	97.9	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.7	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Magnesium	48	1.0	50.00	0	95.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Potassium	47	1.0	50.00	0	94.0	85	115			
Sodium	47	1.0	50.00	0	94.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0015	0.0020	0.002000	0	76.0	50	150			J

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Silver	ND	0.0050								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Iron	0.021	0.020	0.02000	0	106	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A49752**	RunNo:	**49752**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610146**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0046	0.010	0.005000	0	92.6	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A49752**	RunNo:	**49752**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610147**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.46	0.010	0.5000	0	92.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-36876**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605342** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.0012	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36876**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	118	50	150			
Cadmium	0.0027	0.0020	0.002000	0	134	50	150			
Chromium	0.0072	0.0060	0.006000	0	120	50	150			
Copper	0.0045	0.0060	0.006000	0	75.5	50	150			J
Iron	0.022	0.020	0.02000	0	111	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Zinc	0.0044	0.010	0.005000	0	88.6	50	150			J

Sample ID **LCS-36876**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.8	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			
Zinc	0.47	0.010	0.5000	0	93.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00047	0.00050	0.0005000	0	93.9	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Sample ID **1802C47-001EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-57**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602560** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	101	70	130			
Uranium	0.015	0.00050	0.01250	0.0006197	113	70	130			

Sample ID **1802C47-001EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-57**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	102	70	130	1.07	20	
Uranium	0.015	0.00050	0.01250	0.0006197	114	70	130	0.964	20	

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.6	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.6	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.9	85	115			
Selenium	0.023	0.0010	0.02500	0	90.8	85	115			

Sample ID **1802C47-001EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-57**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604516** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.004450	90.4	70	130			
Selenium	0.11	0.0050	0.1250	0.004673	84.2	70	130			

Sample ID **1082C47-001EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.11	0.0050	0.1250	0.004450	86.8	70	130	3.89	20	
Selenium	0.11	0.0050	0.1250	0.004673	81.7	70	130	2.95	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36876**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605617**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36876**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605618**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00069	0.0010	0.001000	0	68.7	50	150			J
Lead	0.00046	0.00050	0.0005000	0	92.0	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID	**MSLCS-36876**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605619**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.4	85	115			
Lead	0.012	0.00050	0.01250	0	93.8	85	115			
Uranium	0.012	0.00050	0.01250	0	94.7	85	115			

Sample ID	**MB-36876**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36876**	RunNo:	**49759**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609689**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36876**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36876**	RunNo:	**49759**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609690**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00079	0.0010	0.001000	0	78.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MSLCS-36876**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **36876**		RunNo: **49759**						
Prep Date:	**3/6/2018**	Analysis Date: **3/13/2018**		SeqNo: **1609691**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		0.022	0.0010	0.02500	0	88.8	85	115			
Uranium		0.011	0.00050	0.01250	0	89.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36861**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36861**	RunNo:	**49616**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1603960**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000054	0.00020								J

Sample ID	**LCS-36861**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36861**	RunNo:	**49616**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1603961**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0054	0.00020	0.005000	0	108	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49685**	RunNo: **49685**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1606752** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49685**	RunNo: **49685**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1606753** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.8	90	110			
Sulfate	9.2	0.50	10.00	0	91.7	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **LCS-36750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	70	130			
Surr: DNOP	0.52		0.5000		105	77.5	161			

Sample ID **MB-36750**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.4	77.5	161			

Sample ID **1802C47-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-57**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1599060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	14	1.0	5.000	8.815	103	83.3	151			
Surr: DNOP	0.55		0.5000		111	77.5	161			

Sample ID **1802C47-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-57**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1599061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	15	1.0	5.000	8.815	119	83.3	151	5.39	20	
Surr: DNOP	0.58		0.5000		117	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595980** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595980** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	119	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID **1802c47-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-57**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	13000	50	1000	12030	126	60.5	137			E
Toluene	1100	50	1000	34.55	102	70	130			
Chlorobenzene	1100	50	1000	0	107	70	130			
1,1-Dichloroethene	1200	50	1000	0	116	70	130			
Trichloroethene (TCE)	1000	50	1000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	520		500.0		104	70	130			
Surr: 4-Bromofluorobenzene	580		500.0		116	70	130			
Surr: Dibromofluoromethane	530		500.0		105	70	130			
Surr: Toluene-d8	490		500.0		97.4	70	130			

Sample ID **1802c47-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-57**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	13000	50	1000	12030	63.3	60.5	137	4.83	20	E
Toluene	990	50	1000	34.55	95.9	70	130	6.12	20	
Chlorobenzene	980	50	1000	0	98.4	70	130	8.24	20	
1,1-Dichloroethene	1100	50	1000	0	109	70	130	6.46	20	
Trichloroethene (TCE)	960	50	1000	0	95.6	70	130	5.42	20	
Surr: 1,2-Dichloroethane-d4	520		500.0		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	580		500.0		116	70	130	0	0	
Surr: Dibromofluoromethane	530		500.0		106	70	130	0	0	
Surr: Toluene-d8	480		500.0		96.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **1802c47-003cms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	82	10	100.0	0	82.3	15	123			
4-Chloro-3-methylphenol	160	10	200.0	0	79.1	26.6	118			
2-Chlorophenol	140	10	200.0	0	71.8	15	120			
1,4-Dichlorobenzene	71	10	100.0	0	71.5	19	108			
2,4-Dinitrotoluene	80	10	100.0	0	79.9	27.8	103			
N-Nitrosodi-n-propylamine	81	10	100.0	0	81.3	32.3	126			
4-Nitrophenol	86	10	200.0	0	42.8	15	72.1			
Pentachlorophenol	140	20	200.0	0	70.9	15	114			
Phenol	120	10	200.0	51.74	36.1	15	67.5			
Pyrene	80	10	100.0	0	79.5	31.2	112			
1,2,4-Trichlorobenzene	84	10	100.0	0	83.9	22.1	123			
Surr: 2-Fluorophenol	95		200.0		47.3	15	114			
Surr: Phenol-d5	79		200.0		39.6	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		77.2	15	161			
Surr: Nitrobenzene-d5	84		100.0		83.9	29.3	120			
Surr: 2-Fluorobiphenyl	71		100.0		71.3	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **1802c47-003cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600762** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	67.8	15	123	19.2	30.5	
4-Chloro-3-methylphenol	140	10	200.0	0	71.8	26.6	118	9.64	50	
2-Chlorophenol	120	10	200.0	0	60.9	15	120	16.4	36.3	
1,4-Dichlorobenzene	56	10	100.0	0	55.9	19	108	24.4	42.1	
2,4-Dinitrotoluene	68	10	100.0	0	67.7	27.8	103	16.6	28.5	
N-Nitrosodi-n-propylamine	67	10	100.0	0	67.2	32.3	126	19.1	25.4	
4-Nitrophenol	50	10	200.0	0	24.9	15	72.1	52.6	50	R
Pentachlorophenol	120	20	200.0	0	57.9	15	114	20.1	50	
Phenol	120	10	200.0	51.74	31.7	15	67.5	7.35	46.1	
Pyrene	69	10	100.0	0	69.0	31.2	112	14.2	34.3	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.1	22.1	123	17.9	43.6	
Surr: 2-Fluorophenol	81		200.0		40.3	15	114	0	0	
Surr: Phenol-d5	74		200.0		36.8	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		68.0	15	161	0	0	
Surr: Nitrobenzene-d5	60		100.0		59.8	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.9	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **1802c47-003cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-58** Batch ID: **36704** RunNo: **49525**
Prep Date: **2/26/2018** Analysis Date: **3/2/2018** SeqNo: **1600762** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	40		100.0		40.1	21	92.2	0	0	

Sample ID **lcs-36704** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **36704** RunNo: **49525**
Prep Date: **2/26/2018** Analysis Date: **3/2/2018** SeqNo: **1600776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.5	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	93.2	40.5	108			
2-Chlorophenol	160	10	200.0	0	81.1	35	103			
1,4-Dichlorobenzene	66	10	100.0	0	66.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	82.7	35.6	91.4			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	140	20	200.0	0	72.2	25.3	98.5			
Phenol	140	10	200.0	0	68.0	20.9	75.1			
Pyrene	77	10	100.0	0	77.3	45.6	108			
1,2,4-Trichlorobenzene	76	10	100.0	0	76.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		68.1	15	114			
Surr: Phenol-d5	130		200.0		64.2	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		79.2	15	161			
Surr: Nitrobenzene-d5	81		100.0		81.3	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.3	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **mb-36704** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **36704** RunNo: **49525**
Prep Date: **2/26/2018** Analysis Date: **3/2/2018** SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	8.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.6	15	114			
Surr: Phenol-d5	73		200.0		36.5	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	15	161			
Surr: Nitrobenzene-d5	67		100.0		66.8	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		44.6	21	92.2			

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**lcs-36823**	SampType:	**LCS**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSW**	Batch ID:	**36823**		RunNo:	**49662**				
Prep Date:	**3/5/2018**	Analysis Date:	**3/8/2018**		SeqNo:	**1605966**	Units:	**%Rec**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID	**mb-36823**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**36823**		RunNo:	**49662**				
Prep Date:	**3/5/2018**	Analysis Date:	**3/8/2018**		SeqNo:	**1605967**	Units:	**%Rec**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C47**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSW**	Batch ID:	**W49345**		RunNo:	**49345**				
Prep Date:		Analysis Date:	**2/23/2018**		SeqNo:	**1593731**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	111	70	130			
Surr: BFB	10		10.00		99.8	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBW**	Batch ID:	**W49345**		RunNo:	**49345**				
Prep Date:		Analysis Date:	**2/23/2018**		SeqNo:	**1593732**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	12		10.00		121	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR

Work Order Number: 1802C47

RcptNo: 1

Received By: Sophia Campuzano 2/22/2018 10:00:00 AM

Completed By: Ashley Gallegos 2/22/2018 2:49:03 PM

Reviewed By: JMO 2/22/18

labeled by: SRC 02/22/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	Checked by: SRC
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: Custody Seals present + intact 02/22/18 SRC

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.3 − 0.2(CF) = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802C47	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*		Air Bubbles (Y or N)
2/20/18	1005	WATER	OW-57	40 ML VOA-5	HCL	-001			✓							✓					
				1 L AMBER-1	NEAT												✓				
				250 ML AMBER-1	NEAT				✓												
				250 ML PLASTIC-1	HNO_3													✓			
				125 ML PLASTIC-1	HNO_3													✓	✓		
				125 ML PLASTIC-1	H_2SO_4														✓		
				125 ML PLASTIC-1	NEAT														✓		
2/20/18	1100	WATER	RW-2	40 ML VOA-5	HCL	-002			✓							✓					
				250 ML AMBER-1	NEAT				✓												
2/20/18	1300	WATER	OW-58	40 ML VOA-5	HCL	-003			✓							✓					
				1 L AMBER-2	NEAT												✓				
				250 ML AMBER-1	NEAT				✓												

Date: 2/21/18 Time: 0700 Relinquished by:
Received by: Courier Date: 02/22/18 Time: 1000

Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.3 - 0.2(CF) = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802C47	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/20/18	1300	WATER	OW-58	250ML PLASTIC-1	HNO_3	-003												✓				
				125ML PLASTIC-1	HNO_3													✓	✓			
				125ML PLASTIC-1	H_2SO_4														✓			
				125ML PLASTIC-1	NEAT														✓			
2/20/18	—	WATER	DUP10	40ML VOA-5	HCL	-004			✓							✓						
				250ML AMBER-1	NEAT				✓													
2/20/18	—	WATER	TRIP BLANK	40ML VOA-3	HCL	-005										✓						

Date: 2/21/18 Time: 0700 Relinquished by:
Received by: Courier Date: 02/22/18 Time: 1000
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 23, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 Sampling Pond OrderNo.: 1802C78

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1802C78**
Date Reported: **3/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:20:00 PM
Lab ID: 1802C78-001
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	11	0.87	2.0	*	mg/L	20	2/23/2018 12:23:40 PM	R49381
Chloride	2600	50	100		mg/L	200	3/12/2018 11:08:06 AM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/23/2018 12:23:40 PM	R49381
Bromide	0.86	0.073	0.50		mg/L	5	2/23/2018 12:11:16 PM	R49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/23/2018 12:11:16 PM	R49381
Phosphorus, Orthophosphate (As P)	1.5	1.2	2.5	J	mg/L	5	2/23/2018 12:11:16 PM	R49381
Sulfate	910	1.9	10		mg/L	20	2/23/2018 12:23:40 PM	R49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.14	0.00099	0.0020		mg/L	1	3/9/2018 4:45:38 PM	B49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:45:38 PM	B49680
Calcium	260	0.39	5.0		mg/L	5	3/12/2018 10:27:47 PM	B49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:45:38 PM	B49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:45:38 PM	B49680
Iron	0.47	0.016	0.020	*	mg/L	1	3/12/2018 10:25:44 PM	B49712
Magnesium	83	0.25	1.0		mg/L	1	3/9/2018 4:45:38 PM	B49680
Manganese	0.16	0.00039	0.0020	*	mg/L	1	3/13/2018 6:20:30 PM	A49752
Potassium	380	0.56	5.0		mg/L	5	3/9/2018 6:01:08 PM	B49680
Silver	0.0037	0.0018	0.0050	J	mg/L	1	3/13/2018 6:20:30 PM	A49752
Sodium	1700	8.2	50		mg/L	50	3/9/2018 6:03:19 PM	B49680
Zinc	0.013	0.0021	0.010		mg/L	1	3/13/2018 6:20:30 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.17	0.0010	0.0020		mg/L	1	3/14/2018 8:10:44 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:10:44 PM	36893
Chromium	0.0027	0.0018	0.0060	J	mg/L	1	3/15/2018 6:00:36 PM	36893
Copper	0.0093	0.0041	0.0060		mg/L	1	3/14/2018 8:10:44 PM	36893
Iron	0.94	0.010	0.020	*	mg/L	1	3/14/2018 8:10:44 PM	36893
Manganese	0.17	0.0011	0.0020	*	mg/L	1	3/14/2018 8:10:44 PM	36893
Silver	0.0094	0.0012	0.0050		mg/L	1	3/14/2018 8:10:44 PM	36893
Zinc	0.024	0.0033	0.010		mg/L	1	3/15/2018 6:00:36 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0064	0.0021	0.0050		mg/L	5	3/7/2018 10:16:30 PM	C49633
Lead	0.00028	0.00017	0.00050	J	mg/L	1	3/5/2018 10:58:55 PM	C49567
Selenium	0.0075	0.0038	0.0050		mg/L	5	3/7/2018 10:16:30 PM	C49633
Uranium	0.00048	0.000096	0.00050	J	mg/L	1	3/5/2018 10:58:55 PM	C49567
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0087	0.0021	0.0050		mg/L	5	3/13/2018 1:22:56 PM	36893
Lead	ND	0.0011	0.0025		mg/L	5	3/9/2018 2:29:37 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:20:00 PM
Lab ID: 1802C78-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	0.011	0.0049	0.0050		mg/L	5	3/13/2018 1:22:56 PM	36893
Uranium	0.00071	0.00034	0.0025	J	mg/L	5	3/9/2018 2:29:37 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00015	0.000037	0.00020	J	mg/L	1	3/9/2018 3:29:44 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Aniline	40	31	100	JD	µg/L	10	3/8/2018 4:01:17 PM	36704
Anthracene	ND	35	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Azobenzene	ND	45	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzoic acid	72	39	200	JD	µg/L	10	3/8/2018 4:01:17 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Carbazole	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Chrysene	ND	38	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:20:00 PM
Lab ID: 1802C78-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4-Dimethylphenol	38	28	100	JD	µg/L	10	3/8/2018 4:01:17 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Fluoranthene	ND	43	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Fluorene	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Isophorone	ND	44	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Methylphenol	110	33	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
3+4-Methylphenol	290	32	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Naphthalene	ND	29	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Phenanthrene	ND	43	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Phenol	460	31	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Pyrene	ND	44	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Pyridine	ND	23	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	10	3/8/2018 4:01:17 PM	36704
Surr: 2-Fluorophenol	0	0	15-114	SD	%Rec	10	3/8/2018 4:01:17 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:20:00 PM
Lab ID: 1802C78-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	0	0	15-97.9	SD	%Rec	10	3/8/2018 4:01:17 PM	36704
Surr: 2,4,6-Tribromophenol	0	0	15-161	SD	%Rec	10	3/8/2018 4:01:17 PM	36704
Surr: Nitrobenzene-d5	0	0	29.3-120	SD	%Rec	10	3/8/2018 4:01:17 PM	36704
Surr: 2-Fluorobiphenyl	0	0	17.5-116	SD	%Rec	10	3/8/2018 4:01:17 PM	36704
Surr: 4-Terphenyl-d14	0	0	21-92.2	SD	%Rec	10	3/8/2018 4:01:17 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	21	0.31	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Toluene	34	0.32	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Ethylbenzene	5.7	0.47	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2,4-Trimethylbenzene	12	0.56	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,3,5-Trimethylbenzene	3.9	0.44	5.0	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Naphthalene	5.7	0.57	10	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
1-Methylnaphthalene	7.6	0.80	20	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
2-Methylnaphthalene	9.1	0.76	20	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
Acetone	460	4.1	50	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Bromoform	ND	1.1	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Bromomethane	ND	1.3	15	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
2-Butanone	ND	5.7	50	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Carbon disulfide	25	2.0	50	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Chloroethane	ND	1.2	10	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Chloroform	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Chloromethane	ND	1.5	15	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2-Dichlorobenzene	ND	0.45	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:20:00 PM
Lab ID: 1802C78-001
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
2-Hexanone	ND	3.3	50	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Isopropylbenzene	1.1	0.26	5.0	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
4-Isopropyltoluene	0.86	0.48	5.0	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
n-Butylbenzene	1.6	0.65	15	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
n-Propylbenzene	2.3	0.37	5.0	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
sec-Butylbenzene	0.87	0.55	5.0	JD	µg/L	5	2/28/2018 1:33:33 PM	A49468
Styrene	ND	0.78	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
tert-Butylbenzene	ND	0.52	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Vinyl chloride	ND	0.89	5.0	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Xylenes, Total	35	1.6	7.5	D	µg/L	5	2/28/2018 1:33:33 PM	A49468
Surr: 1,2-Dichloroethane-d4	108	0	70-130	D	%Rec	5	2/28/2018 1:33:33 PM	A49468
Surr: 4-Bromofluorobenzene	106	0	70-130	D	%Rec	5	2/28/2018 1:33:33 PM	A49468
Surr: Dibromofluoromethane	112	0	70-130	D	%Rec	5	2/28/2018 1:33:33 PM	A49468
Surr: Toluene-d8	91.9	0	70-130	D	%Rec	5	2/28/2018 1:33:33 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:50:00 PM
Lab ID: 1802C78-002
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	10	0.87	2.0	*	mg/L	20	2/23/2018 12:48:29 PM	R49381
Chloride	3700	120	250		mg/L	500	3/12/2018 11:20:57 AM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/23/2018 12:48:29 PM	R49381
Bromide	0.86	0.073	0.50		mg/L	5	2/23/2018 12:36:04 PM	R49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/23/2018 12:36:04 PM	R49381
Phosphorus, Orthophosphate (As P)	2.0	1.2	2.5	J	mg/L	5	2/23/2018 12:36:04 PM	R49381
Sulfate	830	1.9	10		mg/L	20	2/23/2018 12:48:29 PM	R49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.19	0.00099	0.0020		mg/L	1	3/9/2018 4:47:41 PM	B49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:47:41 PM	B49680
Calcium	410	0.39	5.0		mg/L	5	3/12/2018 10:32:03 PM	B49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:47:41 PM	B49680
Copper	0.0038	0.0032	0.0060	J	mg/L	1	3/9/2018 4:47:41 PM	B49680
Iron	0.44	0.016	0.020	*	mg/L	1	3/12/2018 10:29:57 PM	B49712
Magnesium	110	2.5	10		mg/L	10	3/9/2018 6:05:20 PM	B49680
Manganese	0.22	0.00039	0.0020	*	mg/L	1	3/9/2018 4:47:41 PM	B49680
Potassium	290	1.1	10		mg/L	10	3/9/2018 6:05:20 PM	B49680
Silver	0.0054	0.0018	0.0050		mg/L	1	3/13/2018 6:22:20 PM	A49752
Sodium	2300	8.2	50		mg/L	50	3/9/2018 6:07:20 PM	B49680
Zinc	ND	0.0021	0.010		mg/L	1	3/13/2018 6:22:20 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.28	0.0010	0.0020		mg/L	1	3/14/2018 8:12:37 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:12:37 PM	36893
Chromium	0.0058	0.0018	0.0060	J	mg/L	1	3/15/2018 6:02:29 PM	36893
Copper	0.0086	0.0041	0.0060		mg/L	1	3/14/2018 8:12:37 PM	36893
Iron	3.1	0.051	0.10	*	mg/L	5	3/15/2018 6:04:23 PM	36893
Manganese	0.28	0.0011	0.0020	*	mg/L	1	3/14/2018 8:12:37 PM	36893
Silver	0.013	0.0012	0.0050		mg/L	1	3/14/2018 8:12:37 PM	36893
Zinc	0.024	0.0033	0.010		mg/L	1	3/15/2018 6:02:29 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0068	0.0021	0.0050		mg/L	5	3/7/2018 10:21:18 PM	C49633
Lead	0.00034	0.00017	0.00050	J	mg/L	1	3/5/2018 11:03:45 PM	C49567
Selenium	0.0081	0.0038	0.0050		mg/L	5	3/7/2018 10:21:18 PM	C49633
Uranium	0.00066	0.000096	0.00050		mg/L	1	3/5/2018 11:03:45 PM	C49567
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0077	0.0021	0.0050		mg/L	5	3/13/2018 1:02:55 PM	36893
Lead	0.0023	0.0011	0.0025	J	mg/L	5	3/9/2018 2:34:32 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:50:00 PM
Lab ID: 1802C78-002
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	0.0094	0.0049	0.0050		mg/L	5	3/13/2018 1:02:55 PM	36893
Uranium	0.0012	0.00034	0.0025	J	mg/L	5	3/9/2018 2:34:32 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00013	0.000037	0.00020	J	mg/L	1	3/9/2018 3:36:24 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Aniline	41	31	100	JD	µg/L	10	3/8/2018 4:29:07 PM	36704
Anthracene	ND	35	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Azobenzene	ND	45	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzoic acid	72	39	200	JD	µg/L	10	3/8/2018 4:29:07 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Carbazole	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Chrysene	ND	38	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:50:00 PM
Lab ID: 1802C78-002
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4-Dimethylphenol	39	28	100	JD	µg/L	10	3/8/2018 4:29:07 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Fluoranthene	ND	43	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Fluorene	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Isophorone	ND	44	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Methylphenol	110	33	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
3+4-Methylphenol	350	32	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Naphthalene	ND	29	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Phenanthrene	ND	43	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Phenol	450	31	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Pyrene	ND	44	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Pyridine	ND	23	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	10	3/8/2018 4:29:07 PM	36704
Surr: 2-Fluorophenol	0	0	15-114	SD	%Rec	10	3/8/2018 4:29:07 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:50:00 PM
Lab ID: 1802C78-002
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	0	0	15-97.9	SD	%Rec	10	3/8/2018 4:29:07 PM	36704
Surr: 2,4,6-Tribromophenol	0	0	15-161	SD	%Rec	10	3/8/2018 4:29:07 PM	36704
Surr: Nitrobenzene-d5	0	0	29.3-120	SD	%Rec	10	3/8/2018 4:29:07 PM	36704
Surr: 2-Fluorobiphenyl	0	0	17.5-116	SD	%Rec	10	3/8/2018 4:29:07 PM	36704
Surr: 4-Terphenyl-d14	0	0	21-92.2	SD	%Rec	10	3/8/2018 4:29:07 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	3.4	0.31	5.0	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
Toluene	5.4	0.32	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Ethylbenzene	0.82	0.47	5.0	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2,4-Trimethylbenzene	2.0	0.56	5.0	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,3,5-Trimethylbenzene	0.58	0.44	5.0	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Naphthalene	2.2	0.57	10	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
1-Methylnaphthalene	4.1	0.80	20	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
2-Methylnaphthalene	4.2	0.76	20	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
Acetone	310	4.1	50	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Bromoform	ND	1.1	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Bromomethane	ND	1.3	15	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
2-Butanone	55	5.7	50	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Carbon disulfide	23	2.0	50	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Chloroethane	ND	1.2	10	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Chloroform	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Chloromethane	ND	1.5	15	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2-Dichlorobenzene	ND	0.45	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 1:50:00 PM
Lab ID: 1802C78-002
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
2-Hexanone	ND	3.3	50	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Isopropylbenzene	ND	0.26	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
4-Isopropyltoluene	ND	0.48	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
n-Butylbenzene	0.69	0.65	15	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
n-Propylbenzene	0.51	0.37	5.0	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
sec-Butylbenzene	ND	0.55	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Styrene	ND	0.78	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
tert-Butylbenzene	ND	0.52	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Vinyl chloride	ND	0.89	5.0	D	µg/L	5	2/28/2018 2:03:20 PM	A49468
Xylenes, Total	4.8	1.6	7.5	JD	µg/L	5	2/28/2018 2:03:20 PM	A49468
Surr: 1,2-Dichloroethane-d4	107	0	70-130	D	%Rec	5	2/28/2018 2:03:20 PM	A49468
Surr: 4-Bromofluorobenzene	112	0	70-130	D	%Rec	5	2/28/2018 2:03:20 PM	A49468
Surr: Dibromofluoromethane	111	0	70-130	D	%Rec	5	2/28/2018 2:03:20 PM	A49468
Surr: Toluene-d8	93.7	0	70-130	D	%Rec	5	2/28/2018 2:03:20 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 2:25:00 PM
Lab ID: 1802C78-003
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	10	0.87	2.0	*	mg/L	20	2/23/2018 1:13:18 PM	R49381
Chloride	4500	120	250		mg/L	500	3/12/2018 11:33:49 AM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/23/2018 1:13:18 PM	R49381
Bromide	1.0	0.073	0.50		mg/L	5	2/23/2018 1:00:54 PM	R49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/23/2018 1:00:54 PM	R49381
Phosphorus, Orthophosphate (As P)	2.5	1.2	2.5	J	mg/L	5	2/23/2018 1:00:54 PM	R49381
Sulfate	840	1.9	10		mg/L	20	2/23/2018 1:13:18 PM	R49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.22	0.00099	0.0020		mg/L	1	3/9/2018 4:59:01 PM	B49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:59:01 PM	B49680
Calcium	480	0.39	5.0		mg/L	5	3/12/2018 10:36:20 PM	B49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:59:01 PM	B49680
Copper	0.0032	0.0032	0.0060	J	mg/L	1	3/9/2018 4:59:01 PM	B49680
Iron	0.42	0.016	0.020	*	mg/L	1	3/9/2018 4:59:01 PM	B49680
Magnesium	130	2.5	10		mg/L	10	3/9/2018 6:09:22 PM	B49680
Manganese	0.27	0.00039	0.0020	*	mg/L	1	3/9/2018 4:59:01 PM	B49680
Potassium	270	1.1	10		mg/L	10	3/9/2018 6:09:22 PM	B49680
Silver	0.0072	0.0018	0.0050		mg/L	1	3/13/2018 6:29:54 PM	A49752
Sodium	2900	8.2	50		mg/L	50	3/9/2018 6:11:29 PM	B49680
Zinc	0.0057	0.0021	0.010	J	mg/L	1	3/13/2018 6:29:54 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.26	0.0010	0.0020		mg/L	1	3/14/2018 8:14:30 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:14:30 PM	36893
Chromium	0.0036	0.0018	0.0060	J	mg/L	1	3/15/2018 6:06:26 PM	36893
Copper	0.0070	0.0041	0.0060		mg/L	1	3/14/2018 8:14:30 PM	36893
Iron	0.99	0.010	0.020	*	mg/L	1	3/14/2018 8:14:30 PM	36893
Manganese	0.29	0.0011	0.0020	*	mg/L	1	3/14/2018 8:14:30 PM	36893
Silver	0.016	0.0012	0.0050		mg/L	1	3/14/2018 8:14:30 PM	36893
Zinc	0.015	0.0033	0.010		mg/L	1	3/15/2018 6:06:26 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0090	0.0021	0.0050		mg/L	5	3/7/2018 10:26:07 PM	C49633
Lead	ND	0.0017	0.0050		mg/L	10	3/8/2018 6:45:12 PM	B49659
Selenium	0.0093	0.0038	0.0050		mg/L	5	3/7/2018 10:26:07 PM	C49633
Uranium	ND	0.00096	0.0050		mg/L	10	3/8/2018 6:45:12 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0089	0.0041	0.010	J	mg/L	10	3/13/2018 1:07:55 PM	36893
Lead	ND	0.0023	0.0050		mg/L	10	3/13/2018 1:07:55 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 2:25:00 PM
Lab ID: 1802C78-003
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	0.010	0.0098	0.010		mg/L	10	3/13/2018 1:07:55 PM	36893
Uranium	0.0011	0.00068	0.0050	J	mg/L	10	3/13/2018 1:07:55 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000087	0.000037	0.00020	J	mg/L	1	3/9/2018 3:38:38 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Aniline	36	31	100	JD	µg/L	10	3/8/2018 4:57:04 PM	36704
Anthracene	ND	35	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Azobenzene	ND	45	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzoic acid	71	39	200	JD	µg/L	10	3/8/2018 4:57:04 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Carbazole	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Chrysene	ND	38	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 2:25:00 PM
Lab ID: 1802C78-003
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4-Dimethylphenol	37	28	100	JD	µg/L	10	3/8/2018 4:57:04 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Fluoranthene	ND	43	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Fluorene	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Isophorone	ND	44	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Methylphenol	87	33	100	JD	µg/L	10	3/8/2018 4:57:04 PM	36704
3+4-Methylphenol	310	32	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Naphthalene	ND	29	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Phenanthrene	ND	43	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Phenol	380	31	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Pyrene	ND	44	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Pyridine	ND	23	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	10	3/8/2018 4:57:04 PM	36704
Surr: 2-Fluorophenol	0	0	15-114	SD	%Rec	10	3/8/2018 4:57:04 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 2:25:00 PM
Lab ID: 1802C78-003
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	0	0	15-97.9	SD	%Rec	10	3/8/2018 4:57:04 PM	36704
Surr: 2,4,6-Tribromophenol	0	0	15-161	SD	%Rec	10	3/8/2018 4:57:04 PM	36704
Surr: Nitrobenzene-d5	0	0	29.3-120	SD	%Rec	10	3/8/2018 4:57:04 PM	36704
Surr: 2-Fluorobiphenyl	0	0	17.5-116	SD	%Rec	10	3/8/2018 4:57:04 PM	36704
Surr: 4-Terphenyl-d14	0	0	21-92.2	SD	%Rec	10	3/8/2018 4:57:04 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1.3	0.31	5.0	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Toluene	1.9	0.32	5.0	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Ethylbenzene	ND	0.47	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2,4-Trimethylbenzene	0.84	0.56	5.0	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,3,5-Trimethylbenzene	ND	0.44	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Naphthalene	ND	0.57	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1-Methylnaphthalene	3.0	0.80	20	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
2-Methylnaphthalene	3.0	0.76	20	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Acetone	220	4.1	50	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Bromoform	ND	1.1	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Bromomethane	ND	1.3	15	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
2-Butanone	29	5.7	50	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Carbon disulfide	28	2.0	50	J D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Chloroethane	ND	1.2	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Chloroform	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Chloromethane	ND	1.5	15	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2-Dichlorobenzene	ND	0.45	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 2:25:00 PM
Lab ID: 1802C78-003
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
2-Hexanone	ND	3.3	50	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Isopropylbenzene	ND	0.26	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
4-Isopropyltoluene	ND	0.48	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
n-Butylbenzene	ND	0.65	15	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
n-Propylbenzene	ND	0.37	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
sec-Butylbenzene	ND	0.55	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Styrene	ND	0.78	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
tert-Butylbenzene	ND	0.52	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Vinyl chloride	ND	0.89	5.0	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Xylenes, Total	ND	1.6	7.5	D	µg/L	5	2/28/2018 2:32:56 PM	A49468
Surr: 1,2-Dichloroethane-d4	108	0	70-130	D	%Rec	5	2/28/2018 2:32:56 PM	A49468
Surr: 4-Bromofluorobenzene	113	0	70-130	D	%Rec	5	2/28/2018 2:32:56 PM	A49468
Surr: Dibromofluoromethane	111	0	70-130	D	%Rec	5	2/28/2018 2:32:56 PM	A49468
Surr: Toluene-d8	93.2	0	70-130	D	%Rec	5	2/28/2018 2:32:56 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:10:00 PM
Lab ID: 1802C78-004
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	14	0.87	2.0	*	mg/L	20	2/23/2018 1:38:07 PM	R49381
Chloride	6300	120	250		mg/L	500	3/12/2018 11:46:41 AM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/23/2018 1:38:07 PM	R49381
Bromide	1.3	0.073	0.50		mg/L	5	2/23/2018 1:25:43 PM	R49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/23/2018 1:25:43 PM	R49381
Phosphorus, Orthophosphate (As P)	2.6	1.2	2.5		mg/L	5	2/23/2018 1:25:43 PM	R49381
Sulfate	1200	48	250		mg/L	500	3/12/2018 11:46:41 AM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.22	0.00099	0.0020		mg/L	1	3/9/2018 5:01:13 PM	B49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 5:01:13 PM	B49680
Calcium	490	0.39	5.0		mg/L	5	3/12/2018 10:40:43 PM	B49712
Chromium	0.0032	0.0013	0.0060	J	mg/L	1	3/9/2018 5:01:13 PM	B49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 5:01:13 PM	B49680
Iron	0.35	0.016	0.020	*	mg/L	1	3/9/2018 5:01:13 PM	B49680
Magnesium	160	2.5	10		mg/L	10	3/9/2018 6:13:31 PM	B49680
Manganese	0.42	0.00039	0.0020	*	mg/L	1	3/9/2018 5:01:13 PM	B49680
Potassium	300	1.1	10		mg/L	10	3/9/2018 6:13:31 PM	B49680
Silver	0.0074	0.0018	0.0050		mg/L	1	3/13/2018 6:31:44 PM	A49752
Sodium	3900	8.2	50		mg/L	50	3/9/2018 6:15:42 PM	B49680
Zinc	0.0037	0.0021	0.010	J	mg/L	1	3/13/2018 6:31:44 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.32	0.0010	0.0020		mg/L	1	3/14/2018 8:16:23 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:16:23 PM	36893
Chromium	0.0080	0.0018	0.0060		mg/L	1	3/15/2018 6:08:20 PM	36893
Copper	0.0085	0.0041	0.0060		mg/L	1	3/14/2018 8:16:23 PM	36893
Iron	3.0	0.051	0.10	*	mg/L	5	3/15/2018 6:10:14 PM	36893
Manganese	0.51	0.0011	0.0020	*	mg/L	1	3/14/2018 8:16:23 PM	36893
Silver	0.016	0.0012	0.0050		mg/L	1	3/14/2018 8:16:23 PM	36893
Zinc	0.017	0.0033	0.010		mg/L	1	3/15/2018 6:08:20 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.013	0.0021	0.0050	*	mg/L	5	3/7/2018 10:30:55 PM	C49633
Lead	ND	0.0017	0.0050		mg/L	10	3/8/2018 6:50:00 PM	B49659
Selenium	0.013	0.0038	0.0050		mg/L	5	3/7/2018 10:30:55 PM	C49633
Uranium	0.0013	0.00096	0.0050	J	mg/L	10	3/8/2018 6:50:00 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.013	0.0041	0.010	*	mg/L	10	3/13/2018 1:12:54 PM	36893
Lead	ND	0.0023	0.0050		mg/L	10	3/13/2018 1:12:54 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:10:00 PM
Lab ID: 1802C78-004
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	0.013	0.0098	0.010		mg/L	10	3/13/2018 1:12:54 PM	36893
Uranium	0.0016	0.00068	0.0050	J	mg/L	10	3/13/2018 1:12:54 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000075	0.000037	0.00020	J	mg/L	1	3/9/2018 3:40:53 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Aniline	ND	31	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Anthracene	ND	35	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Azobenzene	ND	45	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzoic acid	ND	39	200	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Carbazole	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Chrysene	ND	38	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:10:00 PM
Lab ID: 1802C78-004
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4-Dimethylphenol	32	28	100	JD	µg/L	10	3/8/2018 5:24:57 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Fluoranthene	ND	43	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Fluorene	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Isophorone	ND	44	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Methylphenol	68	33	100	JD	µg/L	10	3/8/2018 5:24:57 PM	36704
3+4-Methylphenol	220	32	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Naphthalene	ND	29	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Phenanthrene	ND	43	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Phenol	290	31	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Pyrene	ND	44	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Pyridine	ND	23	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	10	3/8/2018 5:24:57 PM	36704
Surr: 2-Fluorophenol	0	0	15-114	SD	%Rec	10	3/8/2018 5:24:57 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:10:00 PM
Lab ID: 1802C78-004
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	0	0	15-97.9	SD	%Rec	10	3/8/2018 5:24:57 PM	36704
Surr: 2,4,6-Tribromophenol	0	0	15-161	SD	%Rec	10	3/8/2018 5:24:57 PM	36704
Surr: Nitrobenzene-d5	0	0	29.3-120	SD	%Rec	10	3/8/2018 5:24:57 PM	36704
Surr: 2-Fluorobiphenyl	0	0	17.5-116	SD	%Rec	10	3/8/2018 5:24:57 PM	36704
Surr: 4-Terphenyl-d14	0	0	21-92.2	SD	%Rec	10	3/8/2018 5:24:57 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.41	0.31	5.0	JD	µg/L	5	2/28/2018 3:02:13 PM	A49468
Toluene	0.52	0.32	5.0	JD	µg/L	5	2/28/2018 3:02:13 PM	A49468
Ethylbenzene	ND	0.47	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2,4-Trimethylbenzene	ND	0.56	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,3,5-Trimethylbenzene	ND	0.44	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Naphthalene	ND	0.57	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1-Methylnaphthalene	ND	0.80	20	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
2-Methylnaphthalene	ND	0.76	20	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Acetone	140	4.1	50	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Bromoform	ND	1.1	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Bromomethane	ND	1.3	15	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
2-Butanone	18	5.7	50	JD	µg/L	5	2/28/2018 3:02:13 PM	A49468
Carbon disulfide	21	2.0	50	JD	µg/L	5	2/28/2018 3:02:13 PM	A49468
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Chloroethane	ND	1.2	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Chloroform	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Chloromethane	ND	1.5	15	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2-Dichlorobenzene	ND	0.45	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:10:00 PM
Lab ID: 1802C78-004
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
2-Hexanone	ND	3.3	50	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Isopropylbenzene	ND	0.26	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
4-Isopropyltoluene	ND	0.48	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
n-Butylbenzene	ND	0.65	15	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
n-Propylbenzene	ND	0.37	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
sec-Butylbenzene	ND	0.55	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Styrene	ND	0.78	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
tert-Butylbenzene	ND	0.52	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Vinyl chloride	ND	0.89	5.0	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Xylenes, Total	ND	1.6	7.5	D	µg/L	5	2/28/2018 3:02:13 PM	A49468
Surr: 1,2-Dichloroethane-d4	96.6	0	70-130	D	%Rec	5	2/28/2018 3:02:13 PM	A49468
Surr: 4-Bromofluorobenzene	110	0	70-130	D	%Rec	5	2/28/2018 3:02:13 PM	A49468
Surr: Dibromofluoromethane	103	0	70-130	D	%Rec	5	2/28/2018 3:02:13 PM	A49468
Surr: Toluene-d8	96.2	0	70-130	D	%Rec	5	2/28/2018 3:02:13 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:55:00 PM
Lab ID: 1802C78-005
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	39	0.87	2.0	*	mg/L	20	2/23/2018 2:27:44 PM	R49381
Chloride	7500	250	500		mg/L	1000	3/12/2018 11:59:34 AM	R49744
Bromide	2.0	0.073	0.50		mg/L	5	2/23/2018 2:15:20 PM	R49381
Phosphorus, Orthophosphate (As P)	3.0	1.2	2.5		mg/L	5	2/23/2018 2:15:20 PM	R49381
Sulfate	1900	96	500		mg/L	1000	3/12/2018 11:59:34 AM	R49744
Nitrate+Nitrite as N	2.6	1.3	10	J	mg/L	50	3/16/2018 5:17:15 AM	A49843
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.21	0.00099	0.0020		mg/L	1	3/9/2018 5:03:24 PM	B49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 5:03:24 PM	B49680
Calcium	500	0.39	5.0		mg/L	5	3/12/2018 10:52:46 PM	B49712
Chromium	0.0050	0.0013	0.0060	J	mg/L	1	3/9/2018 5:03:24 PM	B49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 5:03:24 PM	B49680
Iron	0.27	0.016	0.020		mg/L	1	3/9/2018 5:03:24 PM	B49680
Magnesium	170	2.5	10		mg/L	10	3/9/2018 6:17:44 PM	B49680
Manganese	0.52	0.00039	0.0020	*	mg/L	1	3/9/2018 5:03:24 PM	B49680
Potassium	340	1.1	10		mg/L	10	3/9/2018 6:17:44 PM	B49680
Silver	0.0074	0.0018	0.0050		mg/L	1	3/13/2018 6:33:36 PM	A49752
Sodium	4900	16	100		mg/L	100	3/20/2018 4:43:24 PM	B49941
Zinc	ND	0.0021	0.010		mg/L	1	3/13/2018 6:33:36 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.32	0.0010	0.0020		mg/L	1	3/14/2018 8:18:17 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:18:17 PM	36893
Chromium	0.013	0.0018	0.0060		mg/L	1	3/15/2018 6:12:04 PM	36893
Copper	0.0094	0.0041	0.0060		mg/L	1	3/14/2018 8:18:17 PM	36893
Iron	3.9	0.051	0.10	*	mg/L	5	3/15/2018 6:13:59 PM	36893
Manganese	0.64	0.0011	0.0020	*	mg/L	1	3/14/2018 8:18:17 PM	36893
Silver	0.016	0.0012	0.0050		mg/L	1	3/14/2018 8:18:17 PM	36893
Zinc	0.015	0.0033	0.010		mg/L	1	3/15/2018 6:12:04 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.017	0.0021	0.0050	*	mg/L	5	3/7/2018 10:35:44 PM	C49633
Lead	ND	0.0017	0.0050		mg/L	10	3/8/2018 7:04:31 PM	B49659
Selenium	0.015	0.0038	0.0050		mg/L	5	3/7/2018 10:35:44 PM	C49633
Uranium	0.0018	0.00096	0.0050	J	mg/L	10	3/8/2018 7:04:31 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.021	0.0041	0.010	*	mg/L	10	3/13/2018 1:17:54 PM	36893
Lead	0.0026	0.0023	0.0050	J	mg/L	10	3/13/2018 1:17:54 PM	36893
Selenium	0.014	0.0098	0.010		mg/L	10	3/13/2018 1:17:54 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:55:00 PM
Lab ID: 1802C78-005
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Uranium	0.0022	0.00068	0.0050	J	mg/L	10	3/13/2018 1:17:54 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000050	0.000037	0.00020	J	mg/L	1	3/9/2018 3:43:09 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Aniline	ND	31	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Anthracene	ND	35	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Azobenzene	ND	45	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Benz(a)anthracene	51	39	100	JD	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzoic acid	71	39	200	JD	µg/L	10	3/8/2018 5:52:45 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Bis(2-ethylhexyl)phthalate	63	48	100	JD	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Carbazole	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Chrysene	ND	38	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Diethyl phthalate	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:55:00 PM
Lab ID: 1802C78-005
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dimethyl phthalate	ND	36	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4-Dimethylphenol	ND	28	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Fluoranthene	ND	43	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Fluorene	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Isophorone	ND	44	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Methylphenol	34	33	100	JD	µg/L	10	3/8/2018 5:52:45 PM	36704
3+4-Methylphenol	85	32	100	JD	µg/L	10	3/8/2018 5:52:45 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Naphthalene	ND	29	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Phenanthrene	ND	43	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Phenol	130	31	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Pyrene	ND	44	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Pyridine	ND	23	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	10	3/8/2018 5:52:45 PM	36704
Surr: 2-Fluorophenol	0	0	15-114	SD	%Rec	10	3/8/2018 5:52:45 PM	36704
Surr: Phenol-d5	0	0	15-97.9	SD	%Rec	10	3/8/2018 5:52:45 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:55:00 PM
Lab ID: 1802C78-005
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	0	0	15-161	SD	%Rec	10	3/8/2018 5:52:45 PM	36704
Surr: Nitrobenzene-d5	0	0	29.3-120	SD	%Rec	10	3/8/2018 5:52:45 PM	36704
Surr: 2-Fluorobiphenyl	0	0	17.5-116	SD	%Rec	10	3/8/2018 5:52:45 PM	36704
Surr: 4-Terphenyl-d14	0	0	21-92.2	SD	%Rec	10	3/8/2018 5:52:45 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.31	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Toluene	ND	0.32	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Ethylbenzene	ND	0.47	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2,4-Trimethylbenzene	ND	0.56	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,3,5-Trimethylbenzene	ND	0.44	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Naphthalene	ND	0.57	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1-Methylnaphthalene	ND	0.80	20	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
2-Methylnaphthalene	ND	0.76	20	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Acetone	67	4.1	50	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Bromoform	ND	1.1	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Bromomethane	ND	1.3	15	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
2-Butanone	6.4	5.7	50	JD	µg/L	5	2/28/2018 3:31:39 PM	A49468
Carbon disulfide	11	2.0	50	JD	µg/L	5	2/28/2018 3:31:39 PM	A49468
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Chloroethane	ND	1.2	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Chloroform	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Chloromethane	ND	1.5	15	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2-Dichlorobenzene	ND	0.45	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Sampling Pond
Collection Date: 2/21/2018 3:55:00 PM
Lab ID: 1802C78-005
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
2-Hexanone	ND	3.3	50	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Isopropylbenzene	ND	0.26	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
4-Isopropyltoluene	ND	0.48	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
n-Butylbenzene	ND	0.65	15	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
n-Propylbenzene	ND	0.37	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
sec-Butylbenzene	ND	0.55	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Styrene	ND	0.78	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
tert-Butylbenzene	ND	0.52	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Vinyl chloride	ND	0.89	5.0	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Xylenes, Total	ND	1.6	7.5	D	µg/L	5	2/28/2018 3:31:39 PM	A49468
Surr: 1,2-Dichloroethane-d4	102	0	70-130	D	%Rec	5	2/28/2018 3:31:39 PM	A49468
Surr: 4-Bromofluorobenzene	110	0	70-130	D	%Rec	5	2/28/2018 3:31:39 PM	A49468
Surr: Dibromofluoromethane	104	0	70-130	D	%Rec	5	2/28/2018 3:31:39 PM	A49468
Surr: Toluene-d8	98.5	0	70-130	D	%Rec	5	2/28/2018 3:31:39 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 Sampling Pond
Collection Date:
Lab ID: 1802C78-006
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Acetone	ND	0.82	10		µg/L	1	2/28/2018 4:30:44 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 4:30:44 PM	A49468
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 4:30:44 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 Sampling Pond
Collection Date:
Lab ID: 1802C78-006
Matrix: AQUEOUS
Received Date: 2/23/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 4:30:44 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 4:30:44 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 4:30:44 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 4:30:44 PM	A49468
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	1	2/28/2018 4:30:44 PM	A49468
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	2/28/2018 4:30:44 PM	A49468
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	2/28/2018 4:30:44 PM	A49468
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	2/28/2018 4:30:44 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0012	0.0020	0.002000	0	57.5	50	150			J
Cadmium	0.0011	0.0020	0.002000	0	55.0	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.8	50	150			J
Copper	0.0068	0.0060	0.006000	0	114	50	150			
Iron	0.023	0.020	0.02000	0	113	50	150			
Magnesium	0.47	1.0	0.5000	0	94.3	50	150			J
Manganese	0.0018	0.0020	0.002000	0	90.0	50	150			J
Potassium	0.50	1.0	0.5000	0	99.9	50	150			J
Sodium	0.50	1.0	0.5000	0	100	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Magnesium	48	1.0	50.00	0	96.1	85	115			
Manganese	0.49	0.0020	0.5000	0	98.3	85	115			
Potassium	47	1.0	50.00	0	94.6	85	115			
Sodium	48	1.0	50.00	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608456** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Iron	0.021	0.020	0.02000	0	106	50	150			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.0019	0.0020	0.002000	0	94.0	50	150			J
Silver	0.0048	0.0050	0.005000	0	97.0	50	150			J
Zinc	0.0046	0.010	0.005000	0	92.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	99.6	85	115			
Zinc	0.46	0.010	0.5000	0	92.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617070**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617071**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.58	1.0	0.5000	0	116	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617073**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	0.0054	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Copper	0.0052	0.0060	0.006000	0	86.0	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611543** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49832**
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Zinc	0.0034	0.010								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612959**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0059	0.0060	0.006000	0	98.5	50	150			J
Zinc	0.0056	0.010	0.005000	0	111	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612960**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00047	0.00050	0.0005000	0	93.9	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.6	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.6	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.9	85	115			
Selenium	0.023	0.0010	0.02500	0	90.8	85	115			

Sample ID **1082C47-001EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.11	0.0050	0.1250	0.004450	86.8	70	130	3.89	20	
Selenium	0.11	0.0050	0.1250	0.004673	81.7	70	130	2.95	20	

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	97.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.011	0.00050	0.01250	0	91.8	85	115			
Uranium	0.011	0.00050	0.01250	0	91.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606839**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606840**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0014	0.0010	0.001000	0	140	50	150			
Lead	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.6	50	150			J

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609686**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609687**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00077	0.0010	0.001000	0	77.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Sampling Pond

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609688**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	86.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Sampling Pond

Sample ID	**MB-36934**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **36934**			RunNo: **49683**					
Prep Date:	**3/9/2018**	Analysis Date: **3/9/2018**			SeqNo: **1606622**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-36934**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **36934**			RunNo: **49683**					
Prep Date:	**3/9/2018**	Analysis Date: **3/9/2018**			SeqNo: **1606623**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Sample ID	**1802C78-001EMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**EP-2**	Batch ID: **36934**			RunNo: **49683**					
Prep Date:	**3/9/2018**	Analysis Date: **3/9/2018**			SeqNo: **1606625**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0.0001491	90.7	75	125			

Sample ID	**1802C78-001EMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**EP-2**	Batch ID: **36934**			RunNo: **49683**					
Prep Date:	**3/9/2018**	Analysis Date: **3/9/2018**			SeqNo: **1606626**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0.0001491	88.9	75	125	1.96	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.27	0.50								J
Sulfate	0.10	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.7	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.6	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			
Sulfate	9.2	0.50	10.00	0	92.0	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49843**	RunNo: **49843**
Prep Date:	Analysis Date: **3/16/2018**	SeqNo: **1613259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Sampling Pond

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49843**	RunNo: **49843**
Prep Date:	Analysis Date: **3/16/2018**	SeqNo: **1613259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A49843**	RunNo: **49843**
Prep Date:	Analysis Date: **3/16/2018**	SeqNo: **1613260** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.30	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.4	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Sampling Pond

Sample ID **lcs-36704**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.5	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	93.2	40.5	108			
2-Chlorophenol	160	10	200.0	0	81.1	35	103			
1,4-Dichlorobenzene	66	10	100.0	0	66.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	82.7	35.6	91.4			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	140	20	200.0	0	72.2	25.3	98.5			
Phenol	140	10	200.0	0	68.0	20.9	75.1			
Pyrene	77	10	100.0	0	77.3	45.6	108			
1,2,4-Trichlorobenzene	76	10	100.0	0	76.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		68.1	15	114			
Surr: Phenol-d5	130		200.0		64.2	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		79.2	15	161			
Surr: Nitrobenzene-d5	81		100.0		81.3	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.3	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	8.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Sampling Pond

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802C78**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Sampling Pond

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.6	15	114			
Surr: Phenol-d5	73		200.0		36.5	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	15	161			
Surr: Nitrobenzene-d5	67		100.0		66.8	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		44.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1802C78 RcptNo: 1

Received By: **Anne Thorne** 2/23/2018 9:50:00 AM Anne Thorne

Completed By: **Anne Thorne** 2/23/2018 9:55:48 AM Anne Thorne

Reviewed By: I.O 02/23/18

labeled by : SRC 02/23/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 15 (<2 or >12 unless noted)

Adjusted? —

Checked by: SRC

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: TB Date:

By Whom: AT Via: ☐ eMail ☒ Phone ☐ Fax ☐ In Person

Regarding: EPS collection time

Client Instructions: Client confirmed collection time for EPS

16. Additional remarks: IS 1510 / AT 02/26/18

custody Seals intact / AT 02/23/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW & SAMPLING POND 2
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0 both coolers (2) coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802C78	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/21/18	1320	WATER	EP-2	40 ML VOA-5	HCL	001										✓			✓			
				1 L AMBER-1	NEAT	001											✓					
				250 ML PLASTIC-1	HNO_3	001												✓				
				125 ML PLASTIC-1	HNO_3	001												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	001													✓			
				125 ML PLASTIC-1	NEAT	001													✓			
	1350	WATER	EP-3	40 ML VOA-5	HCL	002										✓						
				1 L AMBER-1	NEAT	002											✓					
				250 ML PLASTIC-1	HNO_3	002												✓				
				125 ML PLASTIC-1	HNO_3	002												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	002													✓			
				125 ML PLASTIC-1	NEAT	002													✓			

Date: 2/22/18 Time: 0700 Relinquished by:
Received by: Date Time 02/23/18 0950
Date: Time: Relinquished by:
Received by: Date Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 ~~GW~~ SAMPLING ^ POND
Project #:

Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0 both coolers (2)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802C78
2/21/18	1425	WATER	EP-4	40 ML VOA-5	HCL	203
				1 L AMBER-1	NEAT	203
				250 ML PLASTIC-1	HNO_3	203
				125 ML PLASTIC-1	HNO_3	203
				125 ML PLASTIC-1	H_2SO_4	203
				125 ML PLASTIC-1	NEAT	203
	1510	WATER	EP-5	40 ML VOA-5	HCL	204
				1 L AMBER-1	NEAT	204
				250 ML PLASTIC-1	HNO_3	204
				125 ML PLASTIC-1	HNO_3	204
				125 ML PLASTIC-1	H_2SO_4	204
				125 ML PLASTIC	NEAT	204

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	* MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
									✓						
										✓					
											✓				
											✓	✓			
												✓			
												✓			
									✓						
										✓					
											✓				
											✓	✓			
												✓			
												✓			

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/22/18	0700			02/23/18	0950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 ~~GW~~ SAMPLING ~~POND~~
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0 2 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802-C78
2/21/18	1555	WATER	EP-6	40 ML VOA-5	HCL	-005
				1 L AMBER-1	NEAT	-005
				250 ML PLASTIC-1	HNO_3	-005
				125 ML PLASTIC-1	HNO_3	-005
				125 ML PLASTIC-1	H_2SO_4	-005
				125 ML PLASTIC-1	NEAT	-005
2/21/18	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	-006

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
									✓						
										✓					
											✓				
											✓	✓			
												✓			
												✓			
									✓						

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/22/18	0700			02/23/18	0950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 19, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 Pond Sampling OrderNo.: 1802D25

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/22/2018 12:15:00 PM
Lab ID: 1802D25-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	20	0.87	2.0	*	mg/L	20	2/24/2018 2:39:51 AM	A49381
Chloride	2700	50	100		mg/L	200	3/12/2018 12:12:26 PM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/24/2018 2:39:51 AM	A49381
Bromide	0.98	0.073	0.50		mg/L	5	2/24/2018 2:27:26 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 2:27:26 AM	A49381
Phosphorus, Orthophosphate (As P)	1.9	1.2	2.5	J	mg/L	5	2/24/2018 2:27:26 AM	A49381
Sulfate	900	1.9	10		mg/L	20	2/24/2018 2:39:51 AM	A49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.13	0.0049	0.010		mg/L	5	3/9/2018 7:04:00 PM	B49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:04:00 PM	B49680
Calcium	200	0.39	5.0		mg/L	5	3/9/2018 7:04:00 PM	B49680
Chromium	ND	0.0064	0.030		mg/L	5	3/12/2018 11:32:44 PM	B49712
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:04:00 PM	B49680
Iron	0.52	0.082	0.10	*	mg/L	5	3/9/2018 7:04:00 PM	B49680
Magnesium	72	1.2	5.0		mg/L	5	3/9/2018 7:04:00 PM	B49680
Manganese	0.23	0.0020	0.010	*	mg/L	5	3/9/2018 7:04:00 PM	B49680
Potassium	310	0.56	5.0		mg/L	5	3/9/2018 7:04:00 PM	B49680
Silver	ND	0.0092	0.025		mg/L	5	3/12/2018 11:32:44 PM	B49712
Sodium	1800	8.2	50		mg/L	50	3/9/2018 7:06:10 PM	B49680
Zinc	0.0070	0.0021	0.010	J	mg/L	1	3/13/2018 7:04:27 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	3/1/2018 11:49:54 PM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 11:49:54 PM	36773
Chromium	0.0042	0.0018	0.0060	J	mg/L	1	3/5/2018 2:00:22 PM	36773
Copper	0.0043	0.0041	0.0060	J	mg/L	1	3/1/2018 11:49:54 PM	36773
Iron	1.1	0.051	0.10	*	mg/L	5	3/5/2018 2:08:11 PM	36773
Manganese	0.23	0.0011	0.0020	*	mg/L	1	3/1/2018 11:49:54 PM	36773
Silver	0.0059	0.0012	0.0050		mg/L	1	3/5/2018 2:00:22 PM	36773
Zinc	0.013	0.0033	0.010		mg/L	1	3/5/2018 2:00:22 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.012	0.0084	0.020	J*	mg/L	20	3/12/2018 6:39:49 PM	B49741
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 7:23:45 PM	B49659
Selenium	ND	0.015	0.020		mg/L	20	3/12/2018 6:39:49 PM	B49741
Uranium	0.00079	0.00048	0.0025	J	mg/L	5	3/8/2018 7:23:45 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.013	0.0083	0.020	J*	mg/L	20	3/13/2018 1:40:50 PM	36773
Lead	ND	0.0011	0.0025		mg/L	5	3/9/2018 3:08:55 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/22/2018 12:15:00 PM
Lab ID: 1802D25-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	ND	0.020	0.020		mg/L	20	3/13/2018 1:40:50 PM	36773
Uranium	0.00098	0.00034	0.0025	J	mg/L	5	3/9/2018 3:08:55 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000065	0.000037	0.00020	J	mg/L	1	3/9/2018 4:05:59 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Aniline	ND	31	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Anthracene	ND	35	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Azobenzene	ND	45	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzoic acid	110	39	200	JD	µg/L	1	3/2/2018 3:20:49 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Carbazole	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Chrysene	ND	38	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/22/2018 12:15:00 PM
Lab ID: 1802D25-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4-Dimethylphenol	ND	28	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Fluoranthene	ND	43	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Fluorene	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Isophorone	ND	44	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Methylphenol	89	33	100	JD	µg/L	1	3/2/2018 3:20:49 PM	36704
3+4-Methylphenol	180	32	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Naphthalene	ND	29	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Phenanthrene	ND	43	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Phenol	360	31	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Pyrene	ND	44	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Pyridine	ND	23	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	1	3/2/2018 3:20:49 PM	36704
Surr: 2-Fluorophenol	46.3	0	15-114	D	%Rec	1	3/2/2018 3:20:49 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/22/2018 12:15:00 PM
Lab ID: 1802D25-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	34.5	0	15-97.9	D	%Rec	1	3/2/2018 3:20:49 PM	36704
Surr: 2,4,6-Tribromophenol	72.7	0	15-161	D	%Rec	1	3/2/2018 3:20:49 PM	36704
Surr: Nitrobenzene-d5	70.9	0	29.3-120	D	%Rec	1	3/2/2018 3:20:49 PM	36704
Surr: 2-Fluorobiphenyl	66.5	0	17.5-116	D	%Rec	1	3/2/2018 3:20:49 PM	36704
Surr: 4-Terphenyl-d14	40.9	0	21-92.2	D	%Rec	1	3/2/2018 3:20:49 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1.4	0.062	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Toluene	2.2	0.064	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Ethylbenzene	0.34	0.093	1.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2,4-Trimethylbenzene	0.87	0.11	1.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
1,3,5-Trimethylbenzene	0.28	0.087	1.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Naphthalene	0.68	0.11	2.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
1-Methylnaphthalene	1.1	0.16	4.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
2-Methylnaphthalene	1.3	0.15	4.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
Acetone	110	4.1	50		µg/L	5	2/28/2018 6:28:18 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
2-Butanone	34	1.1	10		µg/L	1	2/28/2018 10:34:51 AM	A49468
Carbon disulfide	29	0.40	10		µg/L	1	2/28/2018 10:34:51 AM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/22/2018 12:15:00 PM
Lab ID: 1802D25-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 10:34:51 AM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 10:34:51 AM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
n-Butylbenzene	0.20	0.13	3.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
n-Propylbenzene	0.18	0.074	1.0	J	µg/L	1	2/28/2018 10:34:51 AM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 10:34:51 AM	A49468
Xylenes, Total	2.1	0.32	1.5		µg/L	1	2/28/2018 10:34:51 AM	A49468
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	2/28/2018 10:34:51 AM	A49468
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	2/28/2018 10:34:51 AM	A49468
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	2/28/2018 10:34:51 AM	A49468
Surr: Toluene-d8	92.1	0	70-130		%Rec	1	2/28/2018 10:34:51 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:30:00 AM
Lab ID: 1802D25-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	17	2.2	5.0	*	mg/L	50	3/12/2018 12:25:17 PM	R49744
Chloride	71000	1200	2500		mg/L	5000	3/12/2018 12:38:10 PM	R49744
Bromide	31	0.73	5.0		mg/L	50	3/12/2018 12:25:17 PM	R49744
Phosphorus, Orthophosphate (As P)	11	5.0	10		mg/L	20	2/24/2018 3:04:39 AM	A49381
Sulfate	12000	480	2500		mg/L	5000	3/12/2018 12:38:10 PM	R49744
Nitrate+Nitrite as N	17	5.2	40	J*	mg/L	200	3/12/2018 3:51:11 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.23	0.0049	0.010		mg/L	5	3/9/2018 7:08:11 PM	B49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:08:11 PM	B49680
Calcium	870	3.9	50		mg/L	50	3/9/2018 7:10:17 PM	B49680
Chromium	ND	0.064	0.30		mg/L	50	3/12/2018 11:37:04 PM	B49712
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:08:11 PM	B49680
Iron	0.15	0.082	0.10		mg/L	5	3/9/2018 7:08:11 PM	B49680
Magnesium	1300	12	50		mg/L	50	3/9/2018 7:10:17 PM	B49680
Manganese	0.45	0.0020	0.010	*	mg/L	5	3/9/2018 7:08:11 PM	B49680
Potassium	1700	5.6	50		mg/L	50	3/9/2018 7:10:17 PM	B49680
Silver	ND	0.092	0.25		mg/L	50	3/12/2018 11:37:04 PM	B49712
Sodium	32000	82	500		mg/L	500	3/12/2018 11:39:15 PM	B49712
Zinc	ND	0.011	0.050		mg/L	5	3/13/2018 8:35:44 PM	A49766
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.25	0.0050	0.010		mg/L	5	3/5/2018 2:12:31 PM	36773
Cadmium	ND	0.0029	0.010		mg/L	5	3/5/2018 2:12:31 PM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:18:16 PM	36773
Copper	ND	0.020	0.030		mg/L	5	3/5/2018 2:12:31 PM	36773
Iron	0.72	0.051	0.10	*	mg/L	5	3/5/2018 2:12:31 PM	36773
Manganese	0.65	0.0055	0.010	*	mg/L	5	3/5/2018 2:12:31 PM	36773
Silver	0.026	0.0061	0.025		mg/L	5	3/5/2018 2:12:31 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:00:35 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.10	0.021	0.050	*	mg/L	50	3/12/2018 6:59:10 PM	B49741
Lead	ND	0.0087	0.025		mg/L	50	3/12/2018 6:59:10 PM	B49741
Selenium	0.099	0.038	0.050	*	mg/L	50	3/12/2018 6:59:10 PM	B49741
Uranium	0.0054	0.0048	0.025	J	mg/L	50	3/12/2018 6:59:10 PM	B49741
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.15	0.083	0.20	J*	mg/L	200	3/13/2018 1:45:51 PM	36773
Lead	ND	0.046	0.10		mg/L	200	3/13/2018 1:45:51 PM	36773
Selenium	ND	0.20	0.20		mg/L	200	3/13/2018 1:45:51 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:30:00 AM
Lab ID: 1802D25-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Uranium	ND	0.014	0.10		mg/L	200	3/13/2018 1:45:51 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/9/2018 4:08:11 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Acenaphthylene	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Aniline	ND	15	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Anthracene	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Azobenzene	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benz(a)anthracene	ND	19	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzo(a)pyrene	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzo(b)fluoranthene	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzo(g,h,i)perylene	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzo(k)fluoranthene	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzoic acid	46	20	100	JD	µg/L	1	3/2/2018 3:48:57 PM	36704
Benzyl alcohol	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Bis(2-chloroethoxy)methane	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Bis(2-chloroethyl)ether	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Bis(2-chloroisopropyl)ether	ND	19	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Bis(2-ethylhexyl)phthalate	ND	24	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Bromophenyl phenyl ether	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Butyl benzyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Carbazole	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Chloro-3-methylphenol	ND	32	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Chloroaniline	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Chloronaphthalene	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Chlorophenol	ND	38	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Chlorophenyl phenyl ether	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Chrysene	ND	19	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Di-n-butyl phthalate	ND	25	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Di-n-octyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Dibenz(a,h)anthracene	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Dibenzofuran	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
1,2-Dichlorobenzene	ND	10	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
1,3-Dichlorobenzene	ND	9.1	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
1,4-Dichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
3,3´-Dichlorobenzidine	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Diethyl phthalate	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:30:00 AM
Lab ID: 1802D25-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dimethyl phthalate	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4-Dichlorophenol	ND	28	100	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4-Dimethylphenol	ND	14	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4,6-Dinitro-2-methylphenol	ND	19	100	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4-Dinitrophenol	ND	13	100	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4-Dinitrotoluene	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,6-Dinitrotoluene	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Fluoranthene	ND	21	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Fluorene	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Hexachlorobenzene	ND	19	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Hexachlorobutadiene	ND	6.7	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Hexachlorocyclopentadiene	ND	6.4	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Hexachloroethane	ND	6.0	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Indeno(1,2,3-cd)pyrene	ND	21	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Isophorone	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
1-Methylnaphthalene	ND	17	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Methylnaphthalene	ND	16	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Methylphenol	ND	17	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
3+4-Methylphenol	ND	16	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
N-Nitrosodi-n-propylamine	ND	23	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
N-Nitrosodimethylamine	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
N-Nitrosodiphenylamine	ND	19	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Naphthalene	ND	14	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Nitroaniline	ND	25	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
3-Nitroaniline	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Nitroaniline	ND	20	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Nitrobenzene	ND	18	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2-Nitrophenol	ND	26	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
4-Nitrophenol	ND	27	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Pentachlorophenol	ND	25	100	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Phenanthrene	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Phenol	ND	16	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Pyrene	ND	22	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Pyridine	ND	11	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
1,2,4-Trichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4,5-Trichlorophenol	ND	26	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
2,4,6-Trichlorophenol	ND	27	50	D	µg/L	1	3/2/2018 3:48:57 PM	36704
Surr: 2-Fluorophenol	2.06	0	15-114	SD	%Rec	1	3/2/2018 3:48:57 PM	36704
Surr: Phenol-d5	2.39	0	15-97.9	SD	%Rec	1	3/2/2018 3:48:57 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:30:00 AM
Lab ID: 1802D25-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	6.84	0	15-161	SD	%Rec	1	3/2/2018 3:48:57 PM	36704
Surr: Nitrobenzene-d5	74.8	0	29.3-120	D	%Rec	1	3/2/2018 3:48:57 PM	36704
Surr: 2-Fluorobiphenyl	75.2	0	17.5-116	D	%Rec	1	3/2/2018 3:48:57 PM	36704
Surr: 4-Terphenyl-d14	96.9	0	21-92.2	SD	%Rec	1	3/2/2018 3:48:57 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2,4-Trimethylbenzene	0.32	0.11	1.0	J	µg/L	1	2/28/2018 11:04:26 AM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Acetone	36	0.82	10		µg/L	1	2/28/2018 11:04:26 AM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
2-Butanone	2.8	1.1	10	J	µg/L	1	2/28/2018 11:04:26 AM	A49468
Carbon disulfide	1.9	0.40	10	J	µg/L	1	2/28/2018 11:04:26 AM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Chloromethane	0.87	0.29	3.0	J	µg/L	1	2/28/2018 11:04:26 AM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:30:00 AM
Lab ID: 1802D25-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 11:04:26 AM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 11:04:26 AM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 11:04:26 AM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 11:04:26 AM	A49468
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	2/28/2018 11:04:26 AM	A49468
Surr: 4-Bromofluorobenzene	118	0	70-130		%Rec	1	2/28/2018 11:04:26 AM	A49468
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/28/2018 11:04:26 AM	A49468
Surr: Toluene-d8	95.1	0	70-130		%Rec	1	2/28/2018 11:04:26 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:50:00 AM
Lab ID: 1802D25-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	16	2.2	5.0	*	mg/L	50	3/12/2018 1:16:45 PM	R49744
Chloride	56000	1200	2500		mg/L	5000	3/12/2018 1:29:37 PM	R49744
Bromide	35	0.73	5.0		mg/L	50	3/12/2018 1:16:45 PM	R49744
Phosphorus, Orthophosphate (As P)	12	5.0	10		mg/L	20	2/24/2018 3:29:28 AM	A49381
Sulfate	9900	480	2500		mg/L	5000	3/12/2018 1:29:37 PM	R49744
Nitrate+Nitrite as N	19	5.2	40	J*	mg/L	200	3/12/2018 4:04:03 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.22	0.0099	0.020		mg/L	10	3/12/2018 11:48:57 PM	B49712
Cadmium	ND	0.010	0.020		mg/L	10	3/12/2018 11:48:57 PM	B49712
Calcium	870	3.9	50		mg/L	50	3/9/2018 7:14:42 PM	B49680
Chromium	ND	0.0064	0.030		mg/L	5	3/13/2018 8:37:05 PM	A49766
Copper	ND	0.032	0.060		mg/L	10	3/12/2018 11:48:57 PM	B49712
Iron	ND	0.16	0.20		mg/L	10	3/12/2018 11:48:57 PM	B49712
Magnesium	1400	12	50		mg/L	50	3/9/2018 7:14:42 PM	B49680
Manganese	0.38	0.0039	0.020	*	mg/L	10	3/12/2018 11:48:57 PM	B49712
Potassium	1800	5.6	50		mg/L	50	3/9/2018 7:14:42 PM	B49680
Silver	0.033	0.018	0.050	J	mg/L	10	3/12/2018 11:48:57 PM	B49712
Sodium	36000	82	500		mg/L	500	3/12/2018 11:53:13 PM	B49712
Zinc	ND	0.011	0.050		mg/L	5	3/13/2018 8:37:05 PM	A49766
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.24	0.0050	0.010		mg/L	5	3/5/2018 2:16:55 PM	36773
Cadmium	ND	0.0029	0.010		mg/L	5	3/5/2018 2:16:55 PM	36773
Chromium	0.017	0.0088	0.030	J	mg/L	5	3/8/2018 1:20:25 PM	36773
Copper	ND	0.020	0.030		mg/L	5	3/5/2018 2:16:55 PM	36773
Iron	0.77	0.051	0.10	*	mg/L	5	3/5/2018 2:16:55 PM	36773
Manganese	0.66	0.0055	0.010	*	mg/L	5	3/5/2018 2:16:55 PM	36773
Silver	0.025	0.0061	0.025	J	mg/L	5	3/5/2018 2:16:55 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:02:47 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.11	0.021	0.050	*	mg/L	50	3/12/2018 7:18:29 PM	B49741
Lead	ND	0.0087	0.025		mg/L	50	3/12/2018 7:18:29 PM	B49741
Selenium	0.12	0.038	0.050	*	mg/L	50	3/12/2018 7:18:29 PM	B49741
Uranium	0.0059	0.0048	0.025	J	mg/L	50	3/12/2018 7:18:29 PM	B49741
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.14	0.083	0.20	J*	mg/L	200	3/13/2018 1:50:51 PM	36773
Lead	ND	0.046	0.10		mg/L	200	3/13/2018 1:50:51 PM	36773
Selenium	ND	0.20	0.20		mg/L	200	3/13/2018 1:50:51 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:50:00 AM
Lab ID: 1802D25-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Uranium	ND	0.014	0.10		mg/L	200	3/13/2018 1:50:51 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/9/2018 4:10:23 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Acenaphthylene	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Aniline	ND	15	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Anthracene	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Azobenzene	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benz(a)anthracene	ND	19	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzo(a)pyrene	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzo(b)fluoranthene	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzo(g,h,i)perylene	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzo(k)fluoranthene	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzoic acid	46	20	100	JD	µg/L	1	3/2/2018 4:17:00 PM	36704
Benzyl alcohol	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Bis(2-chloroethoxy)methane	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Bis(2-chloroethyl)ether	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Bis(2-chloroisopropyl)ether	ND	19	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Bis(2-ethylhexyl)phthalate	ND	24	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Bromophenyl phenyl ether	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Butyl benzyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Carbazole	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Chloro-3-methylphenol	ND	32	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Chloroaniline	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Chloronaphthalene	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Chlorophenol	ND	38	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Chlorophenyl phenyl ether	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Chrysene	ND	19	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Di-n-butyl phthalate	ND	25	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Di-n-octyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Dibenz(a,h)anthracene	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Dibenzofuran	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
1,2-Dichlorobenzene	ND	10	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
1,3-Dichlorobenzene	ND	9.1	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
1,4-Dichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
3,3´-Dichlorobenzidine	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Diethyl phthalate	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:50:00 AM
Lab ID: 1802D25-003 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dimethyl phthalate	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4-Dichlorophenol	ND	28	100	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4-Dimethylphenol	ND	14	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4,6-Dinitro-2-methylphenol	ND	19	100	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4-Dinitrophenol	ND	13	100	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4-Dinitrotoluene	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,6-Dinitrotoluene	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Fluoranthene	ND	21	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Fluorene	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Hexachlorobenzene	ND	19	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Hexachlorobutadiene	ND	6.7	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Hexachlorocyclopentadiene	ND	6.4	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Hexachloroethane	ND	6.0	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Indeno(1,2,3-cd)pyrene	ND	21	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Isophorone	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
1-Methylnaphthalene	ND	17	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Methylnaphthalene	ND	16	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Methylphenol	ND	17	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
3+4-Methylphenol	ND	16	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
N-Nitrosodi-n-propylamine	ND	23	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
N-Nitrosodimethylamine	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
N-Nitrosodiphenylamine	ND	19	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Naphthalene	ND	14	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Nitroaniline	ND	25	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
3-Nitroaniline	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Nitroaniline	ND	20	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Nitrobenzene	ND	18	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2-Nitrophenol	ND	26	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
4-Nitrophenol	ND	27	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Pentachlorophenol	ND	25	100	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Phenanthrene	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Phenol	ND	16	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Pyrene	ND	22	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Pyridine	ND	11	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
1,2,4-Trichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4,5-Trichlorophenol	ND	26	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
2,4,6-Trichlorophenol	ND	27	50	D	µg/L	1	3/2/2018 4:17:00 PM	36704
Surr: 2-Fluorophenol	2.13	0	15-114	SD	%Rec	1	3/2/2018 4:17:00 PM	36704
Surr: Phenol-d5	2.63	0	15-97.9	SD	%Rec	1	3/2/2018 4:17:00 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:50:00 AM
Lab ID: 1802D25-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	8.72	0	15-161	SD	%Rec	1	3/2/2018 4:17:00 PM	36704
Surr: Nitrobenzene-d5	75.7	0	29.3-120	D	%Rec	1	3/2/2018 4:17:00 PM	36704
Surr: 2-Fluorobiphenyl	68.4	0	17.5-116	D	%Rec	1	3/2/2018 4:17:00 PM	36704
Surr: 4-Terphenyl-d14	57.7	0	21-92.2	D	%Rec	1	3/2/2018 4:17:00 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2,4-Trimethylbenzene	0.44	0.11	1.0	J	µg/L	1	2/28/2018 11:34:10 AM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Acetone	28	0.82	10		µg/L	1	2/28/2018 11:34:10 AM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
2-Butanone	2.2	1.1	10	J	µg/L	1	2/28/2018 11:34:10 AM	A49468
Carbon disulfide	0.41	0.40	10	J	µg/L	1	2/28/2018 11:34:10 AM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Chloromethane	2.4	0.29	3.0	J	µg/L	1	2/28/2018 11:34:10 AM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 8:50:00 AM
Lab ID: 1802D25-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 11:34:10 AM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 11:34:10 AM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 11:34:10 AM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 11:34:10 AM	A49468
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	2/28/2018 11:34:10 AM	A49468
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	2/28/2018 11:34:10 AM	A49468
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	2/28/2018 11:34:10 AM	A49468
Surr: Toluene-d8	93.2	0	70-130		%Rec	1	2/28/2018 11:34:10 AM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 9:00:00 AM
Lab ID: 1802D25-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	16	2.2	5.0	*	mg/L	50	3/12/2018 1:42:30 PM	R49744
Chloride	66000	2500	5000		mg/L	1E+0	3/12/2018 1:55:22 PM	R49744
Bromide	40	0.73	5.0		mg/L	50	3/12/2018 1:42:30 PM	R49744
Phosphorus, Orthophosphate (As P)	ND	5.0	10		mg/L	20	2/24/2018 3:54:18 AM	A49381
Sulfate	13000	960	5000		mg/L	1E+0	3/12/2018 1:55:22 PM	R49744
Nitrate+Nitrite as N	21	13	100	J*	mg/L	500	3/12/2018 4:16:56 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.19	0.0099	0.020		mg/L	10	3/12/2018 11:55:14 PM	B49712
Cadmium	ND	0.010	0.020		mg/L	10	3/12/2018 11:55:14 PM	B49712
Calcium	720	3.9	50		mg/L	50	3/9/2018 7:19:08 PM	B49680
Chromium	ND	0.0064	0.030		mg/L	5	3/13/2018 8:38:26 PM	A49766
Copper	ND	0.032	0.060		mg/L	10	3/12/2018 11:55:14 PM	B49712
Iron	0.20	0.16	0.20	J	mg/L	10	3/12/2018 11:55:14 PM	B49712
Magnesium	1500	12	50		mg/L	50	3/9/2018 7:19:08 PM	B49680
Manganese	0.90	0.0039	0.020	*	mg/L	10	3/12/2018 11:55:14 PM	B49712
Potassium	2000	5.6	50		mg/L	50	3/9/2018 7:19:08 PM	B49680
Silver	0.027	0.018	0.050	J	mg/L	10	3/12/2018 11:55:14 PM	B49712
Sodium	40000	82	500		mg/L	500	3/12/2018 11:59:32 PM	B49712
Zinc	ND	0.011	0.050		mg/L	5	3/13/2018 8:38:26 PM	A49766
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.19	0.0050	0.010		mg/L	5	3/5/2018 2:21:18 PM	36773
Cadmium	ND	0.0029	0.010		mg/L	5	3/5/2018 2:21:18 PM	36773
Chromium	0.010	0.0088	0.030	J	mg/L	5	3/8/2018 1:22:33 PM	36773
Copper	ND	0.020	0.030		mg/L	5	3/5/2018 2:21:18 PM	36773
Iron	0.67	0.051	0.10	*	mg/L	5	3/5/2018 2:21:18 PM	36773
Manganese	1.1	0.0055	0.010	*	mg/L	5	3/5/2018 2:21:18 PM	36773
Silver	0.025	0.0061	0.025	J	mg/L	5	3/5/2018 2:21:18 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:04:59 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.15	0.084	0.20	J*	mg/L	200	3/14/2018 2:57:39 PM	C49783
Lead	ND	0.0087	0.025		mg/L	50	3/12/2018 7:47:26 PM	B49741
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 2:57:39 PM	C49783
Uranium	0.0052	0.0048	0.025	J	mg/L	50	3/12/2018 7:47:26 PM	B49741
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.15	0.083	0.20	J*	mg/L	200	3/13/2018 1:55:52 PM	36773
Lead	ND	0.046	0.10		mg/L	200	3/13/2018 1:55:52 PM	36773
Selenium	ND	0.20	0.20		mg/L	200	3/13/2018 1:55:52 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 9:00:00 AM
Lab ID: 1802D25-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Uranium	ND	0.014	0.10		mg/L	200	3/13/2018 1:55:52 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/9/2018 4:12:36 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Acenaphthylene	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Aniline	ND	15	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Anthracene	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Azobenzene	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benz(a)anthracene	ND	19	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzo(a)pyrene	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzo(b)fluoranthene	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzo(g,h,i)perylene	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzo(k)fluoranthene	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzoic acid	41	20	100	JD	µg/L	1	3/2/2018 4:45:00 PM	36704
Benzyl alcohol	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Bis(2-chloroethoxy)methane	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Bis(2-chloroethyl)ether	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Bis(2-chloroisopropyl)ether	ND	19	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Bis(2-ethylhexyl)phthalate	ND	24	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Bromophenyl phenyl ether	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Butyl benzyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Carbazole	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Chloro-3-methylphenol	ND	32	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Chloroaniline	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Chloronaphthalene	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Chlorophenol	ND	38	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Chlorophenyl phenyl ether	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Chrysene	ND	19	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Di-n-butyl phthalate	ND	25	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Di-n-octyl phthalate	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Dibenz(a,h)anthracene	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Dibenzofuran	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
1,2-Dichlorobenzene	ND	10	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
1,3-Dichlorobenzene	ND	9.1	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
1,4-Dichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
3,3´-Dichlorobenzidine	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Diethyl phthalate	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 9:00:00 AM
Lab ID: 1802D25-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dimethyl phthalate	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4-Dichlorophenol	ND	28	100	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4-Dimethylphenol	ND	14	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4,6-Dinitro-2-methylphenol	ND	19	100	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4-Dinitrophenol	ND	13	100	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4-Dinitrotoluene	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,6-Dinitrotoluene	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Fluoranthene	ND	21	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Fluorene	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Hexachlorobenzene	ND	19	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Hexachlorobutadiene	ND	6.7	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Hexachlorocyclopentadiene	ND	6.4	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Hexachloroethane	ND	6.0	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Indeno(1,2,3-cd)pyrene	ND	21	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Isophorone	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
1-Methylnaphthalene	ND	17	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Methylnaphthalene	ND	16	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Methylphenol	ND	17	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
3+4-Methylphenol	ND	16	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
N-Nitrosodi-n-propylamine	ND	23	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
N-Nitrosodimethylamine	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
N-Nitrosodiphenylamine	ND	19	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Naphthalene	ND	14	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Nitroaniline	ND	25	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
3-Nitroaniline	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Nitroaniline	ND	20	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Nitrobenzene	ND	18	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2-Nitrophenol	ND	26	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
4-Nitrophenol	ND	27	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Pentachlorophenol	ND	25	100	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Phenanthrene	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Phenol	ND	16	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Pyrene	ND	22	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Pyridine	ND	11	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
1,2,4-Trichlorobenzene	ND	11	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4,5-Trichlorophenol	ND	26	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
2,4,6-Trichlorophenol	ND	27	50	D	µg/L	1	3/2/2018 4:45:00 PM	36704
Surr: 2-Fluorophenol	6.65	0	15-114	SD	%Rec	1	3/2/2018 4:45:00 PM	36704
Surr: Phenol-d5	15.9	0	15-97.9	D	%Rec	1	3/2/2018 4:45:00 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 9:00:00 AM
Lab ID: 1802D25-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	10.9	0	15-161	SD	%Rec	1	3/2/2018 4:45:00 PM	36704
Surr: Nitrobenzene-d5	66.5	0	29.3-120	D	%Rec	1	3/2/2018 4:45:00 PM	36704
Surr: 2-Fluorobiphenyl	58.4	0	17.5-116	D	%Rec	1	3/2/2018 4:45:00 PM	36704
Surr: 4-Terphenyl-d14	52.4	0	21-92.2	D	%Rec	1	3/2/2018 4:45:00 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2,4-Trimethylbenzene	0.43	0.11	1.0	J	µg/L	1	2/28/2018 12:04:00 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Acetone	36	0.82	10		µg/L	1	2/28/2018 12:04:00 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
2-Butanone	3.1	1.1	10	J	µg/L	1	2/28/2018 12:04:00 PM	A49468
Carbon disulfide	0.70	0.40	10	J	µg/L	1	2/28/2018 12:04:00 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Chloromethane	2.9	0.29	3.0	J	µg/L	1	2/28/2018 12:04:00 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 9:00:00 AM
Lab ID: 1802D25-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 12:04:00 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
4-Methyl-2-pentanone	0.72	0.71	10	J	µg/L	1	2/28/2018 12:04:00 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 12:04:00 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 12:04:00 PM	A49468
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	2/28/2018 12:04:00 PM	A49468
Surr: 4-Bromofluorobenzene	119	0	70-130		%Rec	1	2/28/2018 12:04:00 PM	A49468
Surr: Dibromofluoromethane	115	0	70-130		%Rec	1	2/28/2018 12:04:00 PM	A49468
Surr: Toluene-d8	95.0	0	70-130		%Rec	1	2/28/2018 12:04:00 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 10:25:00 AM
Lab ID: 1802D25-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	27	0.87	2.0	*	mg/L	20	2/24/2018 4:19:08 AM	A49381
Chloride	5400	120	250		mg/L	500	3/12/2018 2:08:15 PM	R49744
Nitrogen, Nitrite (As N)	1.1	0.14	2.0	J	mg/L	20	2/24/2018 4:19:08 AM	A49381
Bromide	1.7	0.073	0.50		mg/L	5	2/24/2018 4:06:43 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 4:06:43 AM	A49381
Phosphorus, Orthophosphate (As P)	2.0	1.2	2.5	J	mg/L	5	2/24/2018 4:06:43 AM	A49381
Sulfate	1600	48	250		mg/L	500	3/12/2018 2:08:15 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.094	0.0049	0.010		mg/L	5	3/9/2018 7:32:19 PM	B49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:32:19 PM	B49680
Calcium	230	0.39	5.0		mg/L	5	3/9/2018 7:32:19 PM	B49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 8:54:54 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:32:19 PM	B49680
Iron	0.32	0.082	0.10	*	mg/L	5	3/9/2018 7:32:19 PM	B49680
Magnesium	130	1.2	5.0		mg/L	5	3/9/2018 7:32:19 PM	B49680
Manganese	0.10	0.0020	0.010	*	mg/L	5	3/9/2018 7:32:19 PM	B49680
Potassium	430	0.56	5.0		mg/L	5	3/9/2018 7:32:19 PM	B49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:01:32 AM	B49712
Sodium	4100	8.2	50		mg/L	50	3/9/2018 7:34:30 PM	B49680
Zinc	0.0045	0.0021	0.010	J	mg/L	1	3/13/2018 7:20:53 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.10	0.0010	0.0020		mg/L	1	3/2/2018 12:04:34 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:04:34 AM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:24:48 PM	36773
Copper	ND	0.0041	0.0060		mg/L	1	3/2/2018 12:04:34 AM	36773
Iron	0.71	0.010	0.020	*	mg/L	1	3/2/2018 12:04:34 AM	36773
Manganese	0.10	0.0011	0.0020	*	mg/L	1	3/2/2018 12:04:34 AM	36773
Silver	0.0084	0.0061	0.025	J	mg/L	5	3/12/2018 9:07:08 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:07:08 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 2:59:52 PM	C49783
Lead	ND	0.0017	0.0050		mg/L	10	3/8/2018 8:02:19 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 2:59:52 PM	C49783
Uranium	0.0011	0.00096	0.0050	J	mg/L	10	3/8/2018 8:02:19 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.022	0.0083	0.020	*	mg/L	20	3/13/2018 2:00:52 PM	36773
Lead	ND	0.0046	0.010		mg/L	20	3/13/2018 2:00:52 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 10:25:00 AM
Lab ID: 1802D25-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	ND	0.020	0.020		mg/L	20	3/13/2018 2:00:52 PM	36773
Uranium	ND	0.0014	0.010		mg/L	20	3/13/2018 2:00:52 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000041	0.000037	0.00020	J	mg/L	1	3/9/2018 4:19:27 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	36	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Acenaphthylene	ND	35	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Aniline	ND	31	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Anthracene	ND	35	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Azobenzene	ND	45	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benz(a)anthracene	ND	39	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzo(a)pyrene	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzo(b)fluoranthene	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzo(g,h,i)perylene	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzo(k)fluoranthene	ND	44	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzoic acid	94	39	200	JD	µg/L	1	3/2/2018 5:12:58 PM	36704
Benzyl alcohol	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Bis(2-chloroethoxy)methane	ND	43	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Bis(2-chloroethyl)ether	ND	43	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Bis(2-chloroisopropyl)ether	ND	39	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Bis(2-ethylhexyl)phthalate	ND	48	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Bromophenyl phenyl ether	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Butyl benzyl phthalate	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Carbazole	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Chloro-3-methylphenol	ND	63	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Chloroaniline	ND	35	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Chloronaphthalene	ND	37	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Chlorophenol	ND	75	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Chlorophenyl phenyl ether	ND	36	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Chrysene	ND	38	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Di-n-butyl phthalate	ND	50	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Di-n-octyl phthalate	ND	47	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Dibenz(a,h)anthracene	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Dibenzofuran	ND	41	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
1,2-Dichlorobenzene	ND	20	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
1,3-Dichlorobenzene	ND	18	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
1,4-Dichlorobenzene	ND	21	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
3,3´-Dichlorobenzidine	ND	39	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 10:25:00 AM
Lab ID: 1802D25-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Dimethyl phthalate	ND	36	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4-Dichlorophenol	ND	57	200	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4-Dimethylphenol	ND	28	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4,6-Dinitro-2-methylphenol	ND	39	200	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4-Dinitrophenol	ND	26	200	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4-Dinitrotoluene	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,6-Dinitrotoluene	ND	45	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Fluoranthene	ND	43	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Fluorene	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Hexachlorobenzene	ND	38	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Hexachlorobutadiene	ND	13	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Hexachlorocyclopentadiene	ND	13	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Hexachloroethane	ND	12	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Indeno(1,2,3-cd)pyrene	ND	42	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Isophorone	ND	44	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
1-Methylnaphthalene	ND	33	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Methylnaphthalene	ND	33	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Methylphenol	75	33	100	JD	µg/L	1	3/2/2018 5:12:58 PM	36704
3+4-Methylphenol	190	32	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
N-Nitrosodi-n-propylamine	ND	46	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
N-Nitrosodimethylamine	ND	35	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
N-Nitrosodiphenylamine	ND	39	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Naphthalene	ND	29	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Nitroaniline	ND	49	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
3-Nitroaniline	ND	43	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Nitroaniline	ND	40	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Nitrobenzene	ND	36	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2-Nitrophenol	ND	52	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
4-Nitrophenol	ND	55	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Pentachlorophenol	ND	49	200	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Phenanthrene	ND	43	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Phenol	250	31	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Pyrene	ND	44	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Pyridine	ND	23	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
1,2,4-Trichlorobenzene	ND	21	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4,5-Trichlorophenol	ND	51	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
2,4,6-Trichlorophenol	ND	55	100	D	µg/L	1	3/2/2018 5:12:58 PM	36704
Surr: 2-Fluorophenol	58.4	0	15-114	D	%Rec	1	3/2/2018 5:12:58 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 10:25:00 AM
Lab ID: 1802D25-005
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	47.9	0	15-97.9	D	%Rec	1	3/2/2018 5:12:58 PM	36704
Surr: 2,4,6-Tribromophenol	94.5	0	15-161	D	%Rec	1	3/2/2018 5:12:58 PM	36704
Surr: Nitrobenzene-d5	87.3	0	29.3-120	D	%Rec	1	3/2/2018 5:12:58 PM	36704
Surr: 2-Fluorobiphenyl	84.2	0	17.5-116	D	%Rec	1	3/2/2018 5:12:58 PM	36704
Surr: 4-Terphenyl-d14	80.9	0	21-92.2	D	%Rec	1	3/2/2018 5:12:58 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Acetone	19	0.82	10		µg/L	1	2/28/2018 12:33:58 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
2-Butanone	3.7	1.1	10	J	µg/L	1	2/28/2018 12:33:58 PM	A49468
Carbon disulfide	11	0.40	10		µg/L	1	2/28/2018 12:33:58 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 10:25:00 AM
Lab ID: 1802D25-005
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 12:33:58 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 12:33:58 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 12:33:58 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 12:33:58 PM	A49468
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	2/28/2018 12:33:58 PM	A49468
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	2/28/2018 12:33:58 PM	A49468
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/28/2018 12:33:58 PM	A49468
Surr: Toluene-d8	94.4	0	70-130		%Rec	1	2/28/2018 12:33:58 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 11:25:00 AM
Lab ID: 1802D25-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	27	0.87	2.0	*	mg/L	20	2/24/2018 5:08:46 AM	A49381
Chloride	28000	1200	2500		mg/L	5000	3/12/2018 2:21:06 PM	R49744
Bromide	8.1	0.29	2.0		mg/L	20	2/24/2018 5:08:46 AM	A49381
Phosphorus, Orthophosphate (As P)	8.4	5.0	10	J	mg/L	20	2/24/2018 5:08:46 AM	A49381
Sulfate	3900	480	2500		mg/L	5000	3/12/2018 2:21:06 PM	R49744
Nitrate+Nitrite as N	5.2	2.6	20	J	mg/L	100	3/12/2018 4:29:48 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.21	0.0049	0.010		mg/L	5	3/9/2018 7:36:32 PM	B49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:36:32 PM	B49680
Calcium	540	3.9	50		mg/L	50	3/9/2018 7:38:39 PM	B49680
Chromium	ND	0.0064	0.030		mg/L	5	3/13/2018 8:45:18 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:36:32 PM	B49680
Iron	0.13	0.082	0.10		mg/L	5	3/9/2018 7:36:32 PM	B49680
Magnesium	650	12	50		mg/L	50	3/9/2018 7:38:39 PM	B49680
Manganese	1.2	0.0020	0.010	*	mg/L	5	3/9/2018 7:36:32 PM	B49680
Potassium	990	5.6	50		mg/L	50	3/9/2018 7:38:39 PM	B49680
Silver	0.022	0.0092	0.025	J	mg/L	5	3/13/2018 12:03:31 AM	B49712
Sodium	19000	82	500		mg/L	500	3/13/2018 12:07:42 AM	B49712
Zinc	ND	0.011	0.050		mg/L	5	3/13/2018 8:45:18 PM	A49766
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.22	0.0050	0.010		mg/L	5	3/5/2018 2:27:32 PM	36773
Cadmium	ND	0.0029	0.010		mg/L	5	3/5/2018 2:27:32 PM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:26:58 PM	36773
Copper	ND	0.020	0.030		mg/L	5	3/5/2018 2:27:32 PM	36773
Iron	0.76	0.051	0.10	*	mg/L	5	3/5/2018 2:27:32 PM	36773
Manganese	1.3	0.0055	0.010	*	mg/L	5	3/5/2018 2:27:32 PM	36773
Silver	0.015	0.0061	0.025	J	mg/L	5	3/5/2018 2:27:32 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:09:07 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:02:06 PM	C49783
Lead	ND	0.0017	0.0050		mg/L	10	3/8/2018 8:07:08 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:02:06 PM	C49783
Uranium	0.0033	0.00096	0.0050	J	mg/L	10	3/8/2018 8:07:08 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.067	0.041	0.10	J*	mg/L	100	3/13/2018 2:05:52 PM	36773
Lead	ND	0.023	0.050		mg/L	100	3/13/2018 2:05:52 PM	36773
Selenium	ND	0.098	0.10		mg/L	100	3/13/2018 2:05:52 PM	36773

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 11:25:00 AM
Lab ID: 1802D25-006 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Uranium	ND	0.0068	0.050		mg/L	100	3/13/2018 2:05:52 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/9/2018 4:21:41 PM	36934
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Benzoic acid	7.4	3.9	20	J	µg/L	1	3/2/2018 5:40:48 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 5:40:48 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 11:25:00 AM
Lab ID: 1802D25-006 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 5:40:48 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 5:40:48 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 5:40:48 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 5:40:48 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 5:40:48 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Phenol	ND	3.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 5:40:48 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 5:40:48 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 5:40:48 PM	36704
Surr: 2-Fluorophenol	3.86	0	15-114	S	%Rec	1	3/2/2018 5:40:48 PM	36704
Surr: Phenol-d5	8.72	0	15-97.9	S	%Rec	1	3/2/2018 5:40:48 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 11:25:00 AM
Lab ID: 1802D25-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	7.65	0	15-161	S	%Rec	1	3/2/2018 5:40:48 PM	36704
Surr: Nitrobenzene-d5	75.9	0	29.3-120		%Rec	1	3/2/2018 5:40:48 PM	36704
Surr: 2-Fluorobiphenyl	74.6	0	17.5-116		%Rec	1	3/2/2018 5:40:48 PM	36704
Surr: 4-Terphenyl-d14	64.9	0	21-92.2		%Rec	1	3/2/2018 5:40:48 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Toluene	0.17	0.064	1.0	J	µg/L	1	2/28/2018 1:03:47 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2,4-Trimethylbenzene	0.19	0.11	1.0	J	µg/L	1	2/28/2018 1:03:47 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Acetone	27	0.82	10		µg/L	1	2/28/2018 1:03:47 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
2-Butanone	1.6	1.1	10	J	µg/L	1	2/28/2018 1:03:47 PM	A49468
Carbon disulfide	0.91	0.40	10	J	µg/L	1	2/28/2018 1:03:47 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Chloromethane	0.73	0.29	3.0	J	µg/L	1	2/28/2018 1:03:47 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 2/23/2018 11:25:00 AM
Lab ID: 1802D25-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 1:03:47 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 1:03:47 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 1:03:47 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 1:03:47 PM	A49468
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	2/28/2018 1:03:47 PM	A49468
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	2/28/2018 1:03:47 PM	A49468
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/28/2018 1:03:47 PM	A49468
Surr: Toluene-d8	94.1	0	70-130		%Rec	1	2/28/2018 1:03:47 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0012	0.0020	0.002000	0	57.5	50	150			J
Cadmium	0.0011	0.0020	0.002000	0	55.0	50	150			J
Calcium	0.49	1.0	0.5000	0	97.5	50	150			J
Copper	0.0068	0.0060	0.006000	0	114	50	150			
Iron	0.023	0.020	0.02000	0	113	50	150			
Magnesium	0.47	1.0	0.5000	0	94.3	50	150			J
Manganese	0.0018	0.0020	0.002000	0	90.0	50	150			J
Potassium	0.50	1.0	0.5000	0	99.9	50	150			J
Sodium	0.50	1.0	0.5000	0	100	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.0	85	115			
Calcium	48	1.0	50.00	0	96.7	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Magnesium	48	1.0	50.00	0	96.1	85	115			
Manganese	0.49	0.0020	0.5000	0	98.3	85	115			
Potassium	47	1.0	50.00	0	94.6	85	115			
Sodium	48	1.0	50.00	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608456** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Cadmium	0.0016	0.0020	0.002000	0	78.0	50	150			J
Chromium	0.0041	0.0060	0.006000	0	67.7	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0020	0.0020	0.002000	0	98.0	50	150			J
Silver	0.0052	0.0050	0.005000	0	104	50	150			
Sodium	0.49	1.0	0.5000	0	97.5	50	150			J

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0071	0.010	0.005000	0	142	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.47	0.010	0.5000	0	94.7	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49766**	RunNo: **49766**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0013	0.0060								J
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49766**	RunNo: **49766**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0063	0.0060	0.006000	0	106	50	150			
Zinc	0.0025	0.010	0.005000	0	50.0	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49766**	RunNo: **49766**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610313** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Zinc	0.48	0.010	0.5000	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB-36773**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599516** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36773**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Chromium	0.0053	0.0060	0.006000	0	88.3	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.029	0.020	0.02000	0	146	50	150			
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	50	150			J

Sample ID **LCS-36773**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.8	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.0	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	97.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.011	0.00050	0.01250	0	91.8	85	115			
Uranium	0.011	0.00050	0.01250	0	91.5	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608989** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00099	0.0010	0.001000	0	98.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.8	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49741**	RunNo:	**49741**					
Prep Date:		Analysis Date:	**3/12/2018**	SeqNo:	**1608991**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	95.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.012	0.00050	0.01250	0	95.0	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C49783**	RunNo:	**49783**					
Prep Date:		Analysis Date:	**3/14/2018**	SeqNo:	**1610887**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49783**	RunNo:	**49783**					
Prep Date:		Analysis Date:	**3/14/2018**	SeqNo:	**1610888**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.3	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49783**	RunNo:	**49783**					
Prep Date:		Analysis Date:	**3/14/2018**	SeqNo:	**1610889**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Selenium	0.023	0.0010	0.02500	0	90.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600651**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600652**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00045	0.00050	0.0005000	0	89.4	50	150			J
Uranium	0.00042	0.00050	0.0005000	0	83.8	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600653**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	94.9	85	115			
Uranium	0.011	0.00050	0.01250	0	89.8	85	115			

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601980**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601981**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00086	0.0010	0.001000	0	86.2	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601982**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Pond Sampling

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602816**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602817**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00097	0.0010	0.001000	0	97.0	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602818**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	93.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID	**MB-36934**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36934**	RunNo:	**49683**					
Prep Date:	**3/9/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606622**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-36934**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36934**	RunNo:	**49683**					
Prep Date:	**3/9/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606623**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.30	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.1	90	110			
Bromide	2.3	0.10	2.500	0	93.4	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.9	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			
Sulfate	9.3	0.50	10.00	0	93.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.3	90	110			
Chloride	4.6	0.50	5.000	0	92.7	90	110			
Bromide	2.4	0.10	2.500	0	95.0	90	110			
Sulfate	9.2	0.50	10.00	0	92.0	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	95.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Pond Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.30	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.4	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Sample ID **1802d25-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EP-12B**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597716** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	1.382	95.2	60.5	137			
Toluene	22	1.0	20.00	2.188	98.5	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.4	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID **1802d25-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EP-12B**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597717** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	1.382	92.5	60.5	137	2.75	20	
Toluene	22	1.0	20.00	2.188	97.8	70	130	0.634	20	
Chlorobenzene	20	1.0	20.00	0	102	70	130	1.16	20	
1,1-Dichloroethene	20	1.0	20.00	0	99.6	70	130	3.69	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.6	70	130	3.51	20	
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		97.9	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		97.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **lcs-36704**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.5	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	93.2	40.5	108			
2-Chlorophenol	160	10	200.0	0	81.1	35	103			
1,4-Dichlorobenzene	66	10	100.0	0	66.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	82.7	35.6	91.4			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	140	20	200.0	0	72.2	25.3	98.5			
Phenol	140	10	200.0	0	68.0	20.9	75.1			
Pyrene	77	10	100.0	0	77.3	45.6	108			
1,2,4-Trichlorobenzene	76	10	100.0	0	76.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		68.1	15	114			
Surr: Phenol-d5	130		200.0		64.2	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		79.2	15	161			
Surr: Nitrobenzene-d5	81		100.0		81.3	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.3	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	8.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 Pond Sampling

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.6	15	114			
Surr: Phenol-d5	73		200.0		36.5	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	15	161			
Surr: Nitrobenzene-d5	67		100.0		66.8	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		44.6	21	92.2			

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D25**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802D25 | RcptNo: 1

Received By: Erin Melendrez 2/23/2018 3:35:00 PM

Completed By: Ashley Gallegos 2/26/2018 10:40:50 AM

Reviewed By: ENM 02/23/18 / ENM

labeled by: PDS / SRA 02/24

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 18

(<2 or >12 unless noted)

Adjusted? NO

Checked by: SRA

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			
2	2.0	Good	Yes			
3	2.6	Good	Yes			
4	2.9	Good	Yes			
5	2.4	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 POND SAMPLING
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D25	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/22/18	1215	WATER	EP-12B	40 ML VOA-5	HCL	-001										✓						
				1 L AMBER-2	NEAT												✓					
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
2/23/18	0830	WATER	EP-8	40 ML VOA-5	HCL	-002										✓						
				1 L AMBER-2	NEAT												✓					
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/23/18	1535			2/23/18	1535
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Cooler 1: 2.6 Cooler 2: 2.0 Cooler 3: 2.6

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING. & POND 3
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

2 of 3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D25	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)*	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/23/18	0850	WATER	EP-7	40 ML VOA-5	HCL	-003										✓						
				1 L AMBER-1	NEAT												✓						
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			
	0900	WATER	EP-11	40 ML VOA-5	HCL	-004										✓						
				1 L AMBER-1	NEAT												✓						
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			

Date: 2/23/18 Time: 1535 Relinquished by: [signature]
Received by: [signature] Date: 2/23/18 Time: 1535
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 ~~GW~~ SAMPLING & POND
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D25	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS *			Air Bubbles (Y or N)
2/23/18	1025	WATER	EP-12	40 ML VOA-5	HCL	-005										✓						
				1 L AMBER-1	NEAT												✓					
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			
2/23/18	1125	WATER	EP-9	40 ML VOA-5	HCL	-006										✓						
				1 L AMBER-1	NEAT												✓					
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			

Date: 2/23/18 Time: 1535 Relinquished by: [signature]
Received by: [signature] Date: 2/23/18 Time: 1535
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 19, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling OW OrderNo.: 1802D26

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/28/2018 2:04:04 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 2:04:04 PM	36750
Surr: DNOP	109	0	77.5-161		%Rec	1	2/28/2018 2:04:04 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	2/27/2018 12:00:31 PM	G49412
Surr: BFB	130	0	69.3-150		%Rec	1	2/27/2018 12:00:31 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.64	0.22	0.50		mg/L	5	2/23/2018 11:08:55 PM	A49381
Chloride	1700	50	100		mg/L	200	3/12/2018 2:33:59 PM	R49744
Nitrogen, Nitrite (As N)	0.37	0.034	0.50	J	mg/L	5	2/23/2018 11:08:55 PM	A49381
Bromide	4.2	0.073	0.50		mg/L	5	2/23/2018 11:08:55 PM	A49381
Nitrogen, Nitrate (As N)	18	0.11	0.50	*	mg/L	5	2/23/2018 11:08:55 PM	A49381
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/23/2018 11:08:55 PM	A49381
Sulfate	750	1.9	10		mg/L	20	2/23/2018 11:21:19 PM	A49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.024	0.0049	0.010		mg/L	5	3/9/2018 7:40:39 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:40:39 PM	C49680
Calcium	110	0.39	5.0		mg/L	5	3/9/2018 7:40:39 PM	C49680
Chromium	0.0057	0.0013	0.0060	J	mg/L	1	3/13/2018 8:56:16 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:40:39 PM	C49680
Iron	ND	0.082	0.10		mg/L	5	3/9/2018 7:40:39 PM	C49680
Magnesium	19	1.2	5.0		mg/L	5	3/9/2018 7:40:39 PM	C49680
Manganese	ND	0.0020	0.010		mg/L	5	3/9/2018 7:40:39 PM	C49680
Potassium	4.4	0.56	5.0	J	mg/L	5	3/9/2018 7:40:39 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:17:23 AM	C49712
Sodium	1500	8.2	50		mg/L	50	3/9/2018 7:42:38 PM	C49680
Zinc	0.012	0.0021	0.010		mg/L	1	3/13/2018 7:24:39 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.23	0.0010	0.0020		mg/L	1	3/2/2018 12:08:14 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:08:14 AM	36773
Chromium	0.020	0.0088	0.030	J	mg/L	5	3/8/2018 1:29:05 PM	36773
Copper	0.0063	0.0041	0.0060		mg/L	1	3/2/2018 12:08:14 AM	36773
Iron	6.7	0.10	0.20	*	mg/L	10	3/5/2018 2:40:42 PM	36773
Manganese	0.25	0.0011	0.0020	*	mg/L	1	3/2/2018 12:08:14 AM	36773
Silver	0.0021	0.0012	0.0050	J	mg/L	1	3/5/2018 2:38:47 PM	36773
Zinc	0.019	0.016	0.050	J	mg/L	5	3/12/2018 9:11:16 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:04:19 PM	C49783
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 8:11:56 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:04:19 PM	C49783
Uranium	0.046	0.00048	0.0025	*	mg/L	5	3/8/2018 8:11:56 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.011	0.0083	0.020	J*	mg/L	20	3/13/2018 2:10:52 PM	36773
Lead	0.0051	0.0011	0.0025		mg/L	5	3/9/2018 4:12:50 PM	36773
Selenium	0.032	0.020	0.020		mg/L	20	3/13/2018 2:10:52 PM	36773
Uranium	0.053	0.00034	0.0025	*	mg/L	5	3/9/2018 4:12:50 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000052	0.000037	0.00020	J	mg/L	1	3/12/2018 3:10:28 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Benzoic acid	5.7	3.9	20	J	µg/L	1	3/2/2018 6:08:38 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 6:08:38 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 6:08:38 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 6:08:38 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 6:08:38 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 6:08:38 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 6:08:38 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 6:08:38 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 6:08:38 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 6:08:38 PM	36704
Surr: 2-Fluorophenol	34.1	0	15-114		%Rec	1	3/2/2018 6:08:38 PM	36704
Surr: Phenol-d5	44.7	0	15-97.9		%Rec	1	3/2/2018 6:08:38 PM	36704
Surr: 2,4,6-Tribromophenol	59.1	0	15-161		%Rec	1	3/2/2018 6:08:38 PM	36704
Surr: Nitrobenzene-d5	92.0	0	29.3-120		%Rec	1	3/2/2018 6:08:38 PM	36704
Surr: 2-Fluorobiphenyl	90.4	0	17.5-116		%Rec	1	3/2/2018 6:08:38 PM	36704
Surr: 4-Terphenyl-d14	74.2	0	21-92.2		%Rec	1	3/2/2018 6:08:38 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Methyl tert-butyl ether (MTBE)	0.46	0.24	1.0	J	µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Acetone	1.8	0.82	10	J	µg/L	1	2/28/2018 12:21:49 AM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 12:21:49 AM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 12:21:49 AM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 12:21:49 AM	W49433
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 12:21:49 AM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 12:21:49 AM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 12:21:49 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 8:20:00 AM
Lab ID: 1802D26-001
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	2/28/2018 12:21:49 AM	W49433
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	2/28/2018 12:21:49 AM	W49433
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/28/2018 12:21:49 AM	W49433
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	2/28/2018 12:21:49 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/28/2018 2:31:34 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 2:31:34 PM	36750
Surr: DNOP	109	0	77.5-161		%Rec	1	2/28/2018 2:31:34 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.13	0.025	0.050		mg/L	1	2/27/2018 12:24:14 PM	G49412
Surr: BFB	6980	0	69.3-150	S	%Rec	1	2/27/2018 12:24:14 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/23/2018 11:58:32 PM	A49381
Chloride	1900	50	100		mg/L	200	3/12/2018 2:46:52 PM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/24/2018 12:10:57 AM	A49381
Bromide	2.7	0.073	0.50		mg/L	5	2/23/2018 11:58:32 PM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/23/2018 11:58:32 PM	A49381
Phosphorus, Orthophosphate (As P)	ND	5.0	10		mg/L	20	2/24/2018 12:10:57 AM	A49381
Sulfate	2700	19	100		mg/L	200	3/12/2018 2:46:52 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.0084	0.0049	0.010	J	mg/L	5	3/9/2018 7:44:42 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:44:42 PM	C49680
Calcium	190	0.39	5.0		mg/L	5	3/9/2018 7:44:42 PM	C49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 8:57:39 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 7:44:42 PM	C49680
Iron	ND	0.082	0.10		mg/L	5	3/9/2018 7:44:42 PM	C49680
Magnesium	66	1.2	5.0		mg/L	5	3/9/2018 7:44:42 PM	C49680
Manganese	0.048	0.0020	0.010		mg/L	5	3/9/2018 7:44:42 PM	C49680
Potassium	0.96	0.56	5.0	J	mg/L	5	3/9/2018 7:44:42 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:19:22 AM	C49712
Sodium	2500	8.2	50		mg/L	50	3/9/2018 7:46:41 PM	C49680
Zinc	ND	0.0021	0.010		mg/L	1	3/13/2018 7:26:32 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.16	0.0010	0.0020		mg/L	1	3/2/2018 12:09:59 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:09:59 AM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:30:55 PM	36773
Copper	0.0073	0.0041	0.0060		mg/L	1	3/2/2018 12:09:59 AM	36773
Iron	4.9	0.051	0.10	*	mg/L	5	3/5/2018 2:42:34 PM	36773
Manganese	0.19	0.0011	0.0020	*	mg/L	1	3/2/2018 12:09:59 AM	36773
Silver	ND	0.0061	0.025		mg/L	5	3/5/2018 2:42:34 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:13:06 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:06:33 PM	C49783
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 8:16:45 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:06:33 PM	C49783
Uranium	0.16	0.019	0.10	*	mg/L	200	3/14/2018 9:13:27 PM	C49811
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.012	0.0083	0.020	J*	mg/L	20	3/13/2018 2:15:53 PM	36773
Lead	0.0039	0.0023	0.0050	J	mg/L	10	3/9/2018 4:27:34 PM	36773
Selenium	ND	0.020	0.020		mg/L	20	3/13/2018 2:15:53 PM	36773
Uranium	0.16	0.00068	0.0050	*	mg/L	10	3/9/2018 4:27:34 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000042	0.000037	0.00020	J	mg/L	1	3/12/2018 3:17:09 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Benzoic acid	14	3.9	20	J	µg/L	1	3/2/2018 6:36:25 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 6:36:25 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 6:36:25 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 6:36:25 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 6:36:25 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 6:36:25 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 6:36:25 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 6:36:25 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 6:36:25 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 6:36:25 PM	36704
Surr: 2-Fluorophenol	3.96	0	15-114	S	%Rec	1	3/2/2018 6:36:25 PM	36704
Surr: Phenol-d5	12.4	0	15-97.9	S	%Rec	1	3/2/2018 6:36:25 PM	36704
Surr: 2,4,6-Tribromophenol	5.82	0	15-161	S	%Rec	1	3/2/2018 6:36:25 PM	36704
Surr: Nitrobenzene-d5	80.1	0	29.3-120		%Rec	1	3/2/2018 6:36:25 PM	36704
Surr: 2-Fluorobiphenyl	80.2	0	17.5-116		%Rec	1	3/2/2018 6:36:25 PM	36704
Surr: 4-Terphenyl-d14	70.8	0	21-92.2		%Rec	1	3/2/2018 6:36:25 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Methyl tert-butyl ether (MTBE)	9.2	0.24	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Acetone	3.3	0.82	10	J	µg/L	1	2/28/2018 12:51:06 AM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 12:51:06 AM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 12:51:06 AM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 12:51:06 AM	W49433
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 12:51:06 AM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 12:51:06 AM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 12:51:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:00:00 AM
Lab ID: 1802D26-002
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	2/28/2018 12:51:06 AM	W49433
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	2/28/2018 12:51:06 AM	W49433
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/28/2018 12:51:06 AM	W49433
Surr: Toluene-d8	97.5	0	70-130		%Rec	1	2/28/2018 12:51:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.2	0.63	1.0		mg/L	1	2/28/2018 2:58:47 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 2:58:47 PM	36750
Surr: DNOP	112	0	77.5-161		%Rec	1	2/28/2018 2:58:47 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.4	0.12	0.25		mg/L	5	2/27/2018 12:47:59 PM	G49412
Surr: BFB	102	0	69.3-150		%Rec	5	2/27/2018 12:47:59 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/24/2018 12:23:21 AM	A49381
Chloride	250	5.0	10		mg/L	20	2/24/2018 12:35:46 AM	A49381
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/24/2018 12:23:21 AM	A49381
Bromide	2.1	0.073	0.50		mg/L	5	2/24/2018 12:23:21 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 12:23:21 AM	A49381
Phosphorus, Orthophosphate (As P)	2.2	1.2	2.5	J	mg/L	5	2/24/2018 12:23:21 AM	A49381
Sulfate	37	0.48	2.5		mg/L	5	2/24/2018 12:23:21 AM	A49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.14	0.0049	0.010		mg/L	5	3/9/2018 7:48:41 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 7:48:41 PM	C49680
Calcium	57	0.39	5.0		mg/L	5	3/9/2018 7:48:41 PM	C49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 9:03:12 PM	A49766
Copper	0.022	0.016	0.030	J	mg/L	5	3/9/2018 7:48:41 PM	C49680
Iron	0.24	0.082	0.10		mg/L	5	3/9/2018 7:48:41 PM	C49680
Magnesium	18	1.2	5.0		mg/L	5	3/9/2018 7:48:41 PM	C49680
Manganese	1.3	0.0020	0.010	*	mg/L	5	3/9/2018 7:48:41 PM	C49680
Potassium	ND	0.56	5.0		mg/L	5	3/9/2018 7:48:41 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:21:23 AM	C49712
Sodium	440	0.82	5.0		mg/L	5	3/9/2018 7:48:41 PM	C49680
Zinc	0.0084	0.0021	0.010	J	mg/L	1	3/13/2018 7:28:23 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.22	0.0010	0.0020		mg/L	1	3/2/2018 12:11:39 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:11:39 AM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:32:45 PM	36773
Copper	0.076	0.0041	0.0060		mg/L	1	3/2/2018 12:11:39 AM	36773
Iron	3.6	0.051	0.10	*	mg/L	5	3/5/2018 2:46:08 PM	36773
Manganese	1.4	0.0055	0.010	*	mg/L	5	3/5/2018 2:46:08 PM	36773
Silver	ND	0.0012	0.0050		mg/L	1	3/5/2018 2:44:21 PM	36773
Zinc	0.022	0.016	0.050	J	mg/L	5	3/12/2018 9:14:56 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:08:46 PM	C49783
Lead	0.016	0.0017	0.0050	*	mg/L	10	3/8/2018 8:21:33 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:08:46 PM	C49783
Uranium	0.053	0.00096	0.0050	*	mg/L	10	3/8/2018 8:21:33 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0083	0.020		mg/L	20	3/14/2018 10:58:24 AM	36773
Lead	0.015	0.00023	0.00050		mg/L	1	3/2/2018 3:48:19 PM	36773
Selenium	ND	0.020	0.020		mg/L	20	3/14/2018 10:58:24 AM	36773
Uranium	0.059	0.00034	0.0025	*	mg/L	5	3/9/2018 4:32:30 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/12/2018 3:19:24 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Benzoic acid	9.4	3.9	20	J	µg/L	1	3/2/2018 7:04:09 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 7:04:09 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 7:04:09 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 7:04:09 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 7:04:09 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 7:04:09 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 7:04:09 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 7:04:09 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 7:04:09 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 7:04:09 PM	36704
Surr: 2-Fluorophenol	48.3	0	15-114		%Rec	1	3/2/2018 7:04:09 PM	36704
Surr: Phenol-d5	39.3	0	15-97.9		%Rec	1	3/2/2018 7:04:09 PM	36704
Surr: 2,4,6-Tribromophenol	78.0	0	15-161		%Rec	1	3/2/2018 7:04:09 PM	36704
Surr: Nitrobenzene-d5	82.3	0	29.3-120		%Rec	1	3/2/2018 7:04:09 PM	36704
Surr: 2-Fluorobiphenyl	78.5	0	17.5-116		%Rec	1	3/2/2018 7:04:09 PM	36704
Surr: 4-Terphenyl-d14	73.7	0	21-92.2		%Rec	1	3/2/2018 7:04:09 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	50	0.31	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Toluene	0.89	0.32	5.0	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
Ethylbenzene	13	0.47	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Methyl tert-butyl ether (MTBE)	1900	12	50		µg/L	50	2/28/2018 2:18:43 AM	W49433
1,2,4-Trimethylbenzene	8.8	0.56	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Naphthalene	ND	0.57	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
1-Methylnaphthalene	ND	0.80	20		µg/L	5	2/28/2018 2:47:52 AM	W49433
2-Methylnaphthalene	ND	0.76	20		µg/L	5	2/28/2018 2:47:52 AM	W49433
Acetone	ND	4.1	50		µg/L	5	2/28/2018 2:47:52 AM	W49433
Bromobenzene	ND	0.70	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Bromodichloromethane	ND	0.88	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Bromoform	ND	1.1	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Bromomethane	ND	1.3	15		µg/L	5	2/28/2018 2:47:52 AM	W49433
2-Butanone	ND	5.7	50		µg/L	5	2/28/2018 2:47:52 AM	W49433
Carbon disulfide	ND	2.0	50		µg/L	5	2/28/2018 2:47:52 AM	W49433
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Chlorobenzene	ND	0.53	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Chloroethane	ND	1.2	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
Chloroform	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Chloromethane	ND	1.5	15		µg/L	5	2/28/2018 2:47:52 AM	W49433
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
Dibromochloromethane	ND	0.36	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Dibromomethane	ND	0.45	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
2,2-Dichloropropane	ND	0.79	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
2-Hexanone	ND	3.3	50		µg/L	5	2/28/2018 2:47:52 AM	W49433
Isopropylbenzene	0.28	0.26	5.0	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	2/28/2018 2:47:52 AM	W49433
Methylene Chloride	2.6	0.54	15	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
n-Butylbenzene	0.67	0.65	15	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
n-Propylbenzene	1.8	0.37	5.0	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
sec-Butylbenzene	0.78	0.55	5.0	J	µg/L	5	2/28/2018 2:47:52 AM	W49433
Styrene	ND	0.78	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	2/28/2018 2:47:52 AM	W49433
Vinyl chloride	ND	0.89	5.0		µg/L	5	2/28/2018 2:47:52 AM	W49433
Xylenes, Total	ND	1.6	7.5		µg/L	5	2/28/2018 2:47:52 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 9:55:00 AM
Lab ID: 1802D26-003
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	98.2	0	70-130		%Rec	5	2/28/2018 2:47:52 AM	W49433
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	5	2/28/2018 2:47:52 AM	W49433
Surr: Dibromofluoromethane	103	0	70-130		%Rec	5	2/28/2018 2:47:52 AM	W49433
Surr: Toluene-d8	98.6	0	70-130		%Rec	5	2/28/2018 2:47:52 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/28/2018 3:25:51 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 3:25:51 PM	36750
Surr: DNOP	113	0	77.5-161		%Rec	1	2/28/2018 3:25:51 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.13	0.025	0.050		mg/L	1	2/27/2018 2:22:50 PM	G49412
Surr: BFB	166	0	69.3-150	S	%Rec	1	2/27/2018 2:22:50 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.32	0.22	0.50	J	mg/L	5	2/24/2018 12:48:10 AM	A49381
Chloride	620	12	25		mg/L	50	3/12/2018 2:59:43 PM	R49744
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/24/2018 12:48:10 AM	A49381
Bromide	1.9	0.073	0.50		mg/L	5	2/24/2018 12:48:10 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 12:48:10 AM	A49381
Phosphorus, Orthophosphate (As P)	1.7	1.2	2.5	J	mg/L	5	2/24/2018 12:48:10 AM	A49381
Sulfate	17	0.48	2.5		mg/L	5	2/24/2018 12:48:10 AM	A49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.31	0.0049	0.010		mg/L	5	3/9/2018 8:00:40 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 8:00:40 PM	C49680
Calcium	81	0.39	5.0		mg/L	5	3/9/2018 8:00:40 PM	C49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 9:04:33 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 8:00:40 PM	C49680
Iron	ND	0.082	0.10		mg/L	5	3/9/2018 8:00:40 PM	C49680
Magnesium	17	1.2	5.0		mg/L	5	3/9/2018 8:00:40 PM	C49680
Manganese	0.032	0.0020	0.010		mg/L	5	3/9/2018 8:00:40 PM	C49680
Potassium	1.2	0.56	5.0	J	mg/L	5	3/9/2018 8:00:40 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:23:32 AM	C49712
Sodium	490	0.82	5.0		mg/L	5	3/9/2018 8:00:40 PM	C49680
Zinc	0.0053	0.0021	0.010	J	mg/L	1	3/13/2018 7:30:08 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.38	0.0010	0.0020		mg/L	1	3/2/2018 12:13:18 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:13:18 AM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:34:52 PM	36773
Copper	0.0098	0.0041	0.0060		mg/L	1	3/2/2018 12:13:18 AM	36773
Iron	1.0	0.051	0.10	*	mg/L	5	3/5/2018 2:49:46 PM	36773
Manganese	0.13	0.0011	0.0020	*	mg/L	1	3/2/2018 12:13:18 AM	36773
Silver	0.0018	0.0012	0.0050	J	mg/L	1	3/5/2018 2:48:01 PM	36773
Zinc	0.017	0.016	0.050	J	mg/L	5	3/12/2018 9:16:58 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:10:59 PM	C49783
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 8:26:22 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:10:59 PM	C49783
Uranium	0.016	0.00048	0.0025		mg/L	5	3/8/2018 8:26:22 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0083	0.020		mg/L	20	3/14/2018 11:03:24 AM	36773
Lead	0.0010	0.00023	0.00050		mg/L	1	3/2/2018 3:53:13 PM	36773
Selenium	ND	0.020	0.020		mg/L	20	3/14/2018 11:03:24 AM	36773
Uranium	0.019	0.000068	0.00050		mg/L	1	3/2/2018 3:53:13 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/12/2018 3:21:39 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Benzoic acid	8.6	3.9	20	J	µg/L	1	3/2/2018 7:31:48 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 7:31:48 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 7:31:48 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 7:31:48 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 7:31:48 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 7:31:48 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 7:31:48 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 7:31:48 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 7:31:48 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 7:31:48 PM	36704
Surr: 2-Fluorophenol	59.2	0	15-114		%Rec	1	3/2/2018 7:31:48 PM	36704
Surr: Phenol-d5	45.9	0	15-97.9		%Rec	1	3/2/2018 7:31:48 PM	36704
Surr: 2,4,6-Tribromophenol	99.3	0	15-161		%Rec	1	3/2/2018 7:31:48 PM	36704
Surr: Nitrobenzene-d5	90.2	0	29.3-120		%Rec	1	3/2/2018 7:31:48 PM	36704
Surr: 2-Fluorobiphenyl	89.6	0	17.5-116		%Rec	1	3/2/2018 7:31:48 PM	36704
Surr: 4-Terphenyl-d14	131	0	21-92.2	S	%Rec	1	3/2/2018 7:31:48 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.22	0.062	1.0	J	µg/L	1	2/28/2018 1:20:22 AM	W49433
Toluene	0.067	0.064	1.0	J	µg/L	1	2/28/2018 1:20:22 AM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Methyl tert-butyl ether (MTBE)	100	0.24	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2-Dichloroethane (EDC)	4.4	0.40	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Acetone	1.4	0.82	10	J	µg/L	1	2/28/2018 1:20:22 AM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 1:20:22 AM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 1:20:22 AM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1-Dichloroethane	0.47	0.40	1.0	J	µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 1:20:22 AM	W49433
Isopropylbenzene	2.5	0.051	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 1:20:22 AM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
sec-Butylbenzene	0.23	0.11	1.0	J	µg/L	1	2/28/2018 1:20:22 AM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 1:20:22 AM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 1:20:22 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 10:35:00 AM
Lab ID: 1802D26-004
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	2/28/2018 1:20:22 AM	W49433
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	2/28/2018 1:20:22 AM	W49433
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/28/2018 1:20:22 AM	W49433
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	2/28/2018 1:20:22 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.0	0.63	1.0		mg/L	1	2/28/2018 3:53:05 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 3:53:05 PM	36750
Surr: DNOP	111	0	77.5-161		%Rec	1	2/28/2018 3:53:05 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	28	2.5	5.0		mg/L	100	2/27/2018 2:46:36 PM	G49412
Surr: BFB	97.0	0	69.3-150		%Rec	100	2/27/2018 2:46:36 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/24/2018 1:12:58 AM	A49381
Chloride	320	5.0	10		mg/L	20	2/24/2018 1:25:23 AM	A49381
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/24/2018 1:12:58 AM	A49381
Bromide	1.1	0.073	0.50		mg/L	5	2/24/2018 1:12:58 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 1:12:58 AM	A49381
Phosphorus, Orthophosphate (As P)	2.6	1.2	2.5		mg/L	5	2/24/2018 1:12:58 AM	A49381
Sulfate	1.6	0.48	2.5	J	mg/L	5	2/24/2018 1:12:58 AM	A49381
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.46	0.0049	0.010		mg/L	5	3/9/2018 8:05:05 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 8:05:05 PM	C49680
Calcium	99	0.39	5.0		mg/L	5	3/9/2018 8:05:05 PM	C49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 9:05:54 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 8:05:05 PM	C49680
Iron	3.3	0.082	0.10	*	mg/L	5	3/9/2018 8:05:05 PM	C49680
Magnesium	31	1.2	5.0		mg/L	5	3/9/2018 8:05:05 PM	C49680
Manganese	3.7	0.0020	0.010	*	mg/L	5	3/9/2018 8:05:05 PM	C49680
Potassium	ND	0.56	5.0		mg/L	5	3/9/2018 8:05:05 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:25:42 AM	C49712
Sodium	380	0.82	5.0		mg/L	5	3/9/2018 8:05:05 PM	C49680
Zinc	0.010	0.0021	0.010		mg/L	1	3/13/2018 7:31:54 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.51	0.0010	0.0020		mg/L	1	3/2/2018 12:14:57 AM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/2/2018 12:14:57 AM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:37:03 PM	36773
Copper	ND	0.0041	0.0060		mg/L	1	3/2/2018 12:14:57 AM	36773
Iron	3.7	0.051	0.10	*	mg/L	5	3/5/2018 2:53:45 PM	36773
Manganese	3.8	0.0055	0.010	*	mg/L	5	3/5/2018 2:53:45 PM	36773
Silver	0.0019	0.0012	0.0050	J	mg/L	1	3/5/2018 2:51:55 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:26:54 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:13:13 PM	C49783
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 8:31:10 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:13:13 PM	C49783
Uranium	0.0036	0.00048	0.0025		mg/L	5	3/8/2018 8:31:10 PM	B49659
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0083	0.020		mg/L	20	3/13/2018 2:40:55 PM	36773
Lead	0.00060	0.00023	0.00050		mg/L	1	3/2/2018 3:58:08 PM	36773
Selenium	ND	0.020	0.020		mg/L	20	3/13/2018 2:40:55 PM	36773
Uranium	0.0043	0.000068	0.00050		mg/L	1	3/2/2018 3:58:08 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/12/2018 3:23:54 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzoic acid	ND	3.9	20		µg/L	1	3/2/2018 7:59:24 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Bis(2-ethylhexyl)phthalate	5.8	4.8	10	J	µg/L	1	3/2/2018 7:59:24 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 7:59:24 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 7:59:24 PM	36704
1-Methylnaphthalene	19	3.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 7:59:24 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Naphthalene	21	2.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 7:59:24 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 7:59:24 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 7:59:24 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	37	3.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 7:59:24 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 7:59:24 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 7:59:24 PM	36704
Surr: 2-Fluorophenol	55.0	0	15-114		%Rec	1	3/2/2018 7:59:24 PM	36704
Surr: Phenol-d5	54.3	0	15-97.9		%Rec	1	3/2/2018 7:59:24 PM	36704
Surr: 2,4,6-Tribromophenol	102	0	15-161		%Rec	1	3/2/2018 7:59:24 PM	36704
Surr: Nitrobenzene-d5	97.1	0	29.3-120		%Rec	1	3/2/2018 7:59:24 PM	36704
Surr: 2-Fluorobiphenyl	90.0	0	17.5-116		%Rec	1	3/2/2018 7:59:24 PM	36704
Surr: 4-Terphenyl-d14	50.0	0	21-92.2		%Rec	1	3/2/2018 7:59:24 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	7700	31	500		µg/L	500	2/28/2018 3:17:01 AM	W49433
Toluene	350	3.2	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Ethylbenzene	620	4.7	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Methyl tert-butyl ether (MTBE)	1600	12	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2,4-Trimethylbenzene	130	5.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,3,5-Trimethylbenzene	28	4.4	50	J	µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Naphthalene	27	5.7	100	J	µg/L	50	2/28/2018 3:46:06 AM	W49433
1-Methylnaphthalene	28	8.0	200	J	µg/L	50	2/28/2018 3:46:06 AM	W49433
2-Methylnaphthalene	ND	7.6	200		µg/L	50	2/28/2018 3:46:06 AM	W49433
Acetone	ND	41	500		µg/L	50	2/28/2018 3:46:06 AM	W49433
Bromobenzene	ND	7.0	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Bromodichloromethane	ND	8.8	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Bromoform	ND	11	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Bromomethane	ND	13	150		µg/L	50	2/28/2018 3:46:06 AM	W49433
2-Butanone	ND	57	500		µg/L	50	2/28/2018 3:46:06 AM	W49433
Carbon disulfide	ND	20	500		µg/L	50	2/28/2018 3:46:06 AM	W49433
Carbon Tetrachloride	ND	5.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Chlorobenzene	ND	5.3	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Chloroethane	ND	12	100		µg/L	50	2/28/2018 3:46:06 AM	W49433
Chloroform	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Chloromethane	ND	15	150		µg/L	50	2/28/2018 3:46:06 AM	W49433
2-Chlorotoluene	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
4-Chlorotoluene	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
cis-1,2-DCE	ND	10	50		µg/L	50	2/28/2018 3:46:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	2/28/2018 3:46:06 AM	W49433
Dibromochloromethane	ND	3.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Dibromomethane	ND	4.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,4-Dichlorobenzene	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Dichlorodifluoromethane	ND	50	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1-Dichloroethane	ND	20	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1-Dichloroethene	ND	4.0	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2-Dichloropropane	ND	5.1	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,3-Dichloropropane	ND	8.4	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
2,2-Dichloropropane	ND	7.9	100		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1-Dichloropropene	ND	4.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Hexachlorobutadiene	ND	40	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
2-Hexanone	ND	33	500		µg/L	50	2/28/2018 3:46:06 AM	W49433
Isopropylbenzene	21	2.6	50	J	µg/L	50	2/28/2018 3:46:06 AM	W49433
4-Isopropyltoluene	ND	4.8	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
4-Methyl-2-pentanone	ND	35	500		µg/L	50	2/28/2018 3:46:06 AM	W49433
Methylene Chloride	ND	5.4	150		µg/L	50	2/28/2018 3:46:06 AM	W49433
n-Butylbenzene	8.8	6.5	150	J	µg/L	50	2/28/2018 3:46:06 AM	W49433
n-Propylbenzene	52	3.7	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
sec-Butylbenzene	ND	5.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Styrene	ND	7.8	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
tert-Butylbenzene	ND	5.2	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	2/28/2018 3:46:06 AM	W49433
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
trans-1,2-DCE	ND	9.2	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Trichlorofluoromethane	ND	9.1	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
1,2,3-Trichloropropane	ND	19	100		µg/L	50	2/28/2018 3:46:06 AM	W49433
Vinyl chloride	ND	8.9	50		µg/L	50	2/28/2018 3:46:06 AM	W49433
Xylenes, Total	300	16	75		µg/L	50	2/28/2018 3:46:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/22/2018 11:20:00 AM
Lab ID: 1802D26-005
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	50	2/28/2018 3:46:06 AM	W49433
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	50	2/28/2018 3:46:06 AM	W49433
Surr: Dibromofluoromethane	103	0	70-130		%Rec	50	2/28/2018 3:46:06 AM	W49433
Surr: Toluene-d8	102	0	70-130		%Rec	50	2/28/2018 3:46:06 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/28/2018 4:20:07 PM	36750
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/28/2018 4:20:07 PM	36750
Surr: DNOP	111	0	77.5-161		%Rec	1	2/28/2018 4:20:07 PM	36750
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.14	0.025	0.050		mg/L	1	2/27/2018 3:10:21 PM	G49412
Surr: BFB	7140	0	69.3-150	S	%Rec	1	2/27/2018 3:10:21 PM	G49412
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/24/2018 1:37:48 AM	A49381
Chloride	1800	50	100		mg/L	200	3/12/2018 3:12:35 PM	R49744
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/24/2018 1:50:13 AM	A49381
Bromide	2.6	0.073	0.50		mg/L	5	2/24/2018 1:37:48 AM	A49381
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/24/2018 1:37:48 AM	A49381
Phosphorus, Orthophosphate (As P)	ND	5.0	10		mg/L	20	2/24/2018 1:50:13 AM	A49381
Sulfate	2500	19	100		mg/L	200	3/12/2018 3:12:35 PM	R49744
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.0078	0.0049	0.010	J	mg/L	5	3/9/2018 8:09:31 PM	C49680
Cadmium	ND	0.0050	0.010		mg/L	5	3/9/2018 8:09:31 PM	C49680
Calcium	200	0.39	5.0		mg/L	5	3/9/2018 8:09:31 PM	C49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/13/2018 9:07:17 PM	A49766
Copper	ND	0.016	0.030		mg/L	5	3/9/2018 8:09:31 PM	C49680
Iron	ND	0.082	0.10		mg/L	5	3/9/2018 8:09:31 PM	C49680
Magnesium	67	1.2	5.0		mg/L	5	3/9/2018 8:09:31 PM	C49680
Manganese	0.049	0.0020	0.010		mg/L	5	3/9/2018 8:09:31 PM	C49680
Potassium	0.98	0.56	5.0	J	mg/L	5	3/9/2018 8:09:31 PM	C49680
Silver	ND	0.0092	0.025		mg/L	5	3/13/2018 12:27:43 AM	C49712
Sodium	2100	8.2	50		mg/L	50	3/9/2018 8:11:30 PM	C49680
Zinc	0.0063	0.0021	0.010	J	mg/L	1	3/13/2018 7:33:29 PM	B49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.24	0.0010	0.0020		mg/L	1	3/5/2018 2:55:57 PM	36773
Cadmium	ND	0.00058	0.0020		mg/L	1	3/5/2018 2:55:57 PM	36773
Chromium	ND	0.0088	0.030		mg/L	5	3/8/2018 1:48:31 PM	36773
Copper	0.0081	0.0041	0.0060		mg/L	1	3/5/2018 2:55:57 PM	36773
Iron	7.9	0.10	0.20	*	mg/L	10	3/5/2018 3:12:27 PM	36773
Manganese	0.29	0.0011	0.0020	*	mg/L	1	3/5/2018 2:55:57 PM	36773
Silver	0.0043	0.0012	0.0050	J	mg/L	1	3/5/2018 2:55:57 PM	36773
Zinc	ND	0.016	0.050		mg/L	5	3/12/2018 9:28:55 PM	36773
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.084	0.20		mg/L	200	3/14/2018 3:15:26 PM	C49783
Lead	ND	0.00087	0.0025		mg/L	5	3/8/2018 8:35:58 PM	B49659
Selenium	ND	0.15	0.20		mg/L	200	3/14/2018 3:15:26 PM	C49783
Uranium	0.15	0.019	0.10	*	mg/L	200	3/14/2018 9:18:16 PM	C49811
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.010	0.0083	0.020	J*	mg/L	20	3/14/2018 11:18:27 AM	36773
Lead	0.0065	0.0023	0.0050		mg/L	10	3/9/2018 5:16:48 PM	36773
Selenium	ND	0.020	0.020		mg/L	20	3/13/2018 2:45:55 PM	36773
Uranium	0.15	0.00068	0.0050	*	mg/L	10	3/9/2018 5:16:48 PM	36773
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/12/2018 3:26:10 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Acenaphthylene	ND	3.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Aniline	ND	3.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Anthracene	ND	3.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Azobenzene	ND	4.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Benzoic acid	5.6	3.9	20	J	µg/L	1	3/5/2018 4:44:24 PM	36704
Benzyl alcohol	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Carbazole	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Chloroaniline	ND	3.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Chlorophenol	ND	7.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Chrysene	ND	3.8	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Dibenzofuran	ND	4.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/5/2018 4:44:24 PM	36704
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Diethyl phthalate	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Fluoranthene	ND	4.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Fluorene	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Hexachloroethane	ND	1.2	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Isophorone	ND	4.4	10		µg/L	1	3/5/2018 4:44:24 PM	36704
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Methylphenol	ND	3.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/5/2018 4:44:24 PM	36704
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Naphthalene	ND	2.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Nitroaniline	ND	4.9	10		µg/L	1	3/5/2018 4:44:24 PM	36704
3-Nitroaniline	ND	4.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Nitroaniline	ND	4.0	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Nitrobenzene	ND	3.6	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2-Nitrophenol	ND	5.2	10		µg/L	1	3/5/2018 4:44:24 PM	36704
4-Nitrophenol	ND	5.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Pentachlorophenol	ND	4.9	20		µg/L	1	3/5/2018 4:44:24 PM	36704
Phenanthrene	ND	4.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Pyrene	ND	4.4	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Pyridine	ND	2.3	10		µg/L	1	3/5/2018 4:44:24 PM	36704
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/5/2018 4:44:24 PM	36704
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/5/2018 4:44:24 PM	36704
Surr: 2-Fluorophenol	48.4	0	15-114		%Rec	1	3/5/2018 4:44:24 PM	36704
Surr: Phenol-d5	38.6	0	15-97.9		%Rec	1	3/5/2018 4:44:24 PM	36704
Surr: 2,4,6-Tribromophenol	63.6	0	15-161		%Rec	1	3/5/2018 4:44:24 PM	36704
Surr: Nitrobenzene-d5	79.4	0	29.3-120		%Rec	1	3/5/2018 4:44:24 PM	36704
Surr: 2-Fluorobiphenyl	78.3	0	17.5-116		%Rec	1	3/5/2018 4:44:24 PM	36704
Surr: 4-Terphenyl-d14	38.8	0	21-92.2		%Rec	1	3/5/2018 4:44:24 PM	36704
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Methyl tert-butyl ether (MTBE)	9.1	0.24	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Acetone	2.9	0.82	10	J	µg/L	1	2/28/2018 1:49:32 AM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 1:49:32 AM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 1:49:32 AM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006 **Matrix:** AQUEOUS **Received Date:** 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 1:49:32 AM	W49433
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 1:49:32 AM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 1:49:32 AM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 1:49:32 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-006
Matrix: AQUEOUS
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	2/28/2018 1:49:32 AM	W49433
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	2/28/2018 1:49:32 AM	W49433
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/28/2018 1:49:32 AM	W49433
Surr: Toluene-d8	99.5	0	70-130		%Rec	1	2/28/2018 1:49:32 AM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-007
Matrix: TRIP BLANK
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	2/27/2018 3:57:49 PM	G49412
Surr: BFB	96.6	0	69.3-150		%Rec	1	2/27/2018 3:57:49 PM	G49412
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Toluene	ND	0.064	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Naphthalene	ND	0.11	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Acetone	1.0	0.82	10	J	µg/L	1	2/27/2018 11:52:30 PM	W49433
Bromobenzene	ND	0.14	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Bromoform	ND	0.21	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Bromomethane	ND	0.26	3.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
2-Butanone	ND	1.1	10		µg/L	1	2/27/2018 11:52:30 PM	W49433
Carbon disulfide	ND	0.40	10		µg/L	1	2/27/2018 11:52:30 PM	W49433
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Chloroethane	ND	0.23	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Chloroform	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Chloromethane	ND	0.29	3.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Dibromomethane	ND	0.091	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1802D26-007
Matrix: TRIP BLANK
Received Date: 2/23/2018 3:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
2-Hexanone	ND	0.66	10		µg/L	1	2/27/2018 11:52:30 PM	W49433
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/27/2018 11:52:30 PM	W49433
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Styrene	ND	0.16	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/27/2018 11:52:30 PM	W49433
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/27/2018 11:52:30 PM	W49433
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	2/27/2018 11:52:30 PM	W49433
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	2/27/2018 11:52:30 PM	W49433
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	2/27/2018 11:52:30 PM	W49433
Surr: Toluene-d8	100	0	70-130		%Rec	1	2/27/2018 11:52:30 PM	W49433

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	81.0	50	150			J
Cadmium	0.0012	0.0020	0.002000	0	58.0	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Copper	0.0089	0.0060	0.006000	0	148	50	150			
Iron	0.025	0.020	0.02000	0	123	50	150			
Magnesium	0.50	1.0	0.5000	0	99.4	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Potassium	0.55	1.0	0.5000	0	110	50	150			J
Sodium	0.54	1.0	0.5000	0	108	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607284** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	97.5	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	99.5	85	115			
Magnesium	48	1.0	50.00	0	96.8	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Potassium	48	1.0	50.00	0	95.0	85	115			
Sodium	48	1.0	50.00	0	96.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608459** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608460** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0052	0.0050	0.005000	0	103	50	150			

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	113	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0071	0.010	0.005000	0	142	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.47	0.010	0.5000	0	94.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A49766**	RunNo:	**49766**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610311**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0013	0.0060								J

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A49766**	RunNo:	**49766**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610312**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0063	0.0060	0.006000	0	106	50	150			

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A49766**	RunNo:	**49766**					
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610313**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.0060	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-36773**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599516** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36773**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Chromium	0.0053	0.0060	0.006000	0	88.3	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.029	0.020	0.02000	0	146	50	150			
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	50	150			J

Sample ID **LCS-36773**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36773**	RunNo: **49490**
Prep Date: **2/28/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.8	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.4	85	115			
Chromium	0.49	0.0060	0.5000	0	98.0	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	97.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49659**	RunNo: **49659**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1605852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.011	0.00050	0.01250	0	91.8	85	115			
Uranium	0.011	0.00050	0.01250	0	91.5	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610887** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610888** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.3	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Selenium	0.023	0.0010	0.02500	0	90.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49811**	RunNo: **49811**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1611749** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49811**	RunNo: **49811**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1611750** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	103	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49811**	RunNo: **49811**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1611751** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600651**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600652**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00045	0.00050	0.0005000	0	89.4	50	150			J
Uranium	0.00042	0.00050	0.0005000	0	83.8	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49509**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600653**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	94.9	85	115			
Uranium	0.011	0.00050	0.01250	0	89.8	85	115			

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601980**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601981**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00086	0.0010	0.001000	0	86.2	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49557**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/5/2018**	SeqNo:	**1601982**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36773**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602816**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36773**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602817**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00097	0.0010	0.001000	0	97.0	50	150			J

Sample ID	**MSLCS-36773**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36773**	RunNo:	**49582**					
Prep Date:	**2/28/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602818**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	93.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36955**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607730**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000040	0.00020								J

Sample ID	**LCS-36955**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607731**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Sample ID	**1802D26-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-60**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607733**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	.00005210	88.2	75	125			

Sample ID	**1802D26-001FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-60**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607734**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0044	0.00020	0.005000	.00005210	86.7	75	125	1.74	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.30	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A49381**	RunNo: **49381**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1594504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.1	90	110			
Bromide	2.3	0.10	2.500	0	93.4	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.9	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			
Sulfate	9.3	0.50	10.00	0	93.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49744**	RunNo: **49744**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609110** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			
Sulfate	9.2	0.50	10.00	0	92.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **LCS-36750**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	70	130			
Surr: DNOP	0.52		0.5000		105	77.5	161			

Sample ID **MB-36750**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36750**	RunNo: **49445**
Prep Date: **2/27/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.4	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G49412**	RunNo: **49412**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595909** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G49412**	RunNo: **49412**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595910** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.59	0.050	0.5000	0	118	75.8	123			
Surr: BFB	22		20.00		110	69.3	150			

Sample ID **1802D26-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-54**	Batch ID: **G49412**	RunNo: **49412**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595914** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.3	0.25	2.500	2.399	116	52.5	149			
Surr: BFB	110		100.0		113	69.3	150			

Sample ID **1802D26-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-54**	Batch ID: **G49412**	RunNo: **49412**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.1	0.25	2.500	2.399	107	52.5	149	4.25	20	
Surr: BFB	110		100.0		111	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595980** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595980** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49433**	RunNo: **49433**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1595983** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	119	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **lcs-36704**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.5	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	93.2	40.5	108			
2-Chlorophenol	160	10	200.0	0	81.1	35	103			
1,4-Dichlorobenzene	66	10	100.0	0	66.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	82.7	35.6	91.4			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	140	20	200.0	0	72.2	25.3	98.5			
Phenol	140	10	200.0	0	68.0	20.9	75.1			
Pyrene	77	10	100.0	0	77.3	45.6	108			
1,2,4-Trichlorobenzene	76	10	100.0	0	76.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		68.1	15	114			
Surr: Phenol-d5	130		200.0		64.2	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		79.2	15	161			
Surr: Nitrobenzene-d5	81		100.0		81.3	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.3	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	8.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**	
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**
19-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling OW

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.6	15	114			
Surr: Phenol-d5	73		200.0		36.5	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	15	161			
Surr: Nitrobenzene-d5	67		100.0		66.8	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		44.6	21	92.2			

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D26**

19-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802D26 | RcptNo: 1

Received By: **Erin Melendrez** 2/23/2018 3:35:00 PM

Completed By: **Ashley Gallegos** 2/26/2018 10:23:30 AM

Reviewed By: ENM 02/23/2018 / PDS Labeled by: ENM(2/26) / SRC 02/23/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SRC

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			
2	2.0	Good	Yes			
3	2.6	Good	Yes			
4	2.9	Good	Yes			
5	2.4	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D26	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/22/18	0820	WATER	OW-60	40 ML VOA-5	HCL	-001			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	0900	WATER	OW-59	40 ML VOA-5	HCL	-002			✓							✓						
				1 L AMBER-2	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/23/18	1535			2/23/18	1535
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
Cooler 1: 2.6 Cooler 2: 2.0 Cooler 3: 2.6
Cooler 4: 2.9 Cooler 5: 2.4

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1202D26	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	* MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/22/18	0900	WATER	OW-59	125 ML PLASTIC-1	H_2SO_4	-002													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT	1													✓			
	0955	WATER	OW-54	40 ML VOA-5	HCL	-003			✓							✓						
				1 L AMBER-1	NEAT	|											✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT	↓													✓			
	1035	WATER	OW-56	40 ML VOA-5	HCL	-004			✓							✓						
	↓	↓	↓	1 L AMBER-1	NEAT	↓											✓					
↓	↓	↓	↓	250 ML AMBER-1	NEAT	↓			✓													

Date: 2/23/18 Time: 1535 Relinquished by: [signature]
Received by: [signature] Date: 2/23/18 Time: 1535

Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/CC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1202026	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/22/18	1035	WATER	OW-56	250 ML PLASTIC-1	HNO_3	-004												✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	1120	WATER	OW-55	40 ML VOA-5	HCL	-005			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250ML AMBER-1	NEAT				✓													
				250ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			

Date	Time	Relinquished by	Received by	Date	Time
2/23/18	1535			2/23/18	1535
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D26	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS *			Air Bubbles (Y or N)
2/22/18	—	WATER	DUP11	40 ML VOA-5	HCL	-006			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			
↓	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	-007										✓						

Date: 2/23/18 Time: 1535 Relinquished by: Received by: Date: 2/23/18 Time: 1535
Date: Time: Relinquished by: Received by: Date: Time:

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 23, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 1st QTR 2018 GW Sampling Boundary OrderNo.: 1802E43

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1802E43**
Date Reported: **3/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 4:31:01 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 4:31:01 PM	36805
Surr: DNOP	110	0	77.5-161		%Rec	1	3/5/2018 4:31:01 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.034	0.025	0.050	J	mg/L	1	3/1/2018 12:19:48 PM	G49481
Surr: BFB	89.5	0	69.3-150		%Rec	1	3/1/2018 12:19:48 PM	G49481
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/28/2018 12:23:16 PM	R49479
Chloride	1300	25	50		mg/L	100	3/9/2018 6:00:42 AM	R49642
Nitrogen, Nitrite (As N)	0.32	0.034	0.50	J	mg/L	5	2/28/2018 12:23:16 PM	R49479
Bromide	1.1	0.073	0.50		mg/L	5	2/28/2018 12:23:16 PM	R49479
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/28/2018 12:23:16 PM	R49479
Phosphorus, Orthophosphate (As P)	1.4	1.2	2.5	J	mg/L	5	2/28/2018 12:23:16 PM	R49479
Sulfate	210	0.48	2.5		mg/L	5	2/28/2018 12:23:16 PM	R49479
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.10	0.00099	0.0020		mg/L	1	3/19/2018 9:15:32 PM	C49900
Cadmium	ND	0.0010	0.0020		mg/L	1	3/19/2018 9:15:32 PM	C49900
Calcium	56	0.078	1.0		mg/L	1	3/19/2018 9:15:32 PM	C49900
Chromium	ND	0.0013	0.0060		mg/L	1	3/19/2018 9:15:32 PM	C49900
Copper	ND	0.0032	0.0060		mg/L	1	3/19/2018 9:15:32 PM	C49900
Iron	0.32	0.016	0.020	*	mg/L	1	3/20/2018 7:10:55 PM	A49941
Magnesium	7.3	0.25	1.0		mg/L	1	3/19/2018 9:15:32 PM	C49900
Manganese	0.033	0.00039	0.0020		mg/L	1	3/19/2018 9:15:32 PM	C49900
Potassium	2.9	0.11	1.0		mg/L	1	3/19/2018 9:15:32 PM	C49900
Silver	ND	0.0018	0.0050		mg/L	1	3/19/2018 9:15:32 PM	C49900
Sodium	1000	3.3	20		mg/L	20	3/20/2018 5:04:01 PM	A49941
Zinc	0.0074	0.0021	0.010	J	mg/L	1	3/19/2018 9:15:32 PM	C49900
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	3/14/2018 8:20:11 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:20:11 PM	36893
Chromium	ND	0.0018	0.0060		mg/L	1	3/15/2018 6:15:50 PM	36893
Copper	ND	0.0041	0.0060		mg/L	1	3/14/2018 8:20:11 PM	36893
Iron	0.40	0.010	0.020	*	mg/L	1	3/14/2018 8:20:11 PM	36893
Manganese	0.038	0.0011	0.0020		mg/L	1	3/14/2018 8:20:11 PM	36893
Silver	0.0016	0.0012	0.0050	J	mg/L	1	3/14/2018 8:20:11 PM	36893
Zinc	ND	0.0033	0.010		mg/L	1	3/15/2018 6:15:50 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0042	0.010		mg/L	10	3/14/2018 1:17:28 PM	B49783
Lead	ND	0.00017	0.00050		mg/L	1	3/12/2018 6:01:15 PM	B49741
Selenium	ND	0.0076	0.010		mg/L	10	3/14/2018 1:17:28 PM	B49783
Uranium	0.036	0.00096	0.0050	*	mg/L	10	3/14/2018 1:17:28 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.00094	0.00041	0.0010	J	mg/L	1	3/14/2018 12:08:32 PM	36893
Lead	ND	0.00023	0.00050		mg/L	1	3/14/2018 12:08:32 PM	36893
Selenium	0.0027	0.00098	0.0010		mg/L	1	3/14/2018 12:08:32 PM	36893
Uranium	0.042	0.00034	0.0025	*	mg/L	5	3/14/2018 11:53:29 AM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000037	0.00020	J	mg/L	1	3/12/2018 3:53:20 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Acenaphthylene	ND	3.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Aniline	ND	3.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Anthracene	ND	3.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Azobenzene	ND	4.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzoic acid	21	3.9	20		µg/L	1	3/8/2018 7:16:06 PM	36823
Benzyl alcohol	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Carbazole	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Chloroaniline	ND	3.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Chlorophenol	ND	7.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Chrysene	ND	3.8	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Dibenzofuran	ND	4.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/8/2018 7:16:06 PM	36823
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Diethyl phthalate	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Fluoranthene	ND	4.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Fluorene	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Hexachloroethane	ND	1.2	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Isophorone	ND	4.4	10		µg/L	1	3/8/2018 7:16:06 PM	36823
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Methylphenol	ND	3.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/8/2018 7:16:06 PM	36823
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Naphthalene	ND	2.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Nitroaniline	ND	4.9	10		µg/L	1	3/8/2018 7:16:06 PM	36823
3-Nitroaniline	ND	4.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Nitroaniline	ND	4.0	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Nitrobenzene	ND	3.6	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2-Nitrophenol	ND	5.2	10		µg/L	1	3/8/2018 7:16:06 PM	36823
4-Nitrophenol	ND	5.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Pentachlorophenol	ND	4.9	20		µg/L	1	3/8/2018 7:16:06 PM	36823
Phenanthrene	ND	4.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Pyrene	ND	4.4	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Pyridine	ND	2.3	10		µg/L	1	3/8/2018 7:16:06 PM	36823
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/8/2018 7:16:06 PM	36823
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/8/2018 7:16:06 PM	36823
Surr: 2-Fluorophenol	57.0	0	15-114		%Rec	1	3/8/2018 7:16:06 PM	36823
Surr: Phenol-d5	44.1	0	15-97.9		%Rec	1	3/8/2018 7:16:06 PM	36823
Surr: 2,4,6-Tribromophenol	90.3	0	15-161		%Rec	1	3/8/2018 7:16:06 PM	36823
Surr: Nitrobenzene-d5	80.1	0	29.3-120		%Rec	1	3/8/2018 7:16:06 PM	36823
Surr: 2-Fluorobiphenyl	80.5	0	17.5-116		%Rec	1	3/8/2018 7:16:06 PM	36823
Surr: 4-Terphenyl-d14	51.2	0	21-92.2		%Rec	1	3/8/2018 7:16:06 PM	36823
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Toluene	0.078	0.064	1.0	J	µg/L	1	2/28/2018 5:29:44 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Methyl tert-butyl ether (MTBE)	36	0.24	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2-Dichloroethane (EDC)	0.62	0.40	1.0	J	µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Acetone	ND	0.82	10		µg/L	1	2/28/2018 5:29:44 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 5:29:44 PM	A49468
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 5:29:44 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1-Dichloroethane	0.76	0.40	1.0	J	µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 5:29:44 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 5:29:44 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 5:29:44 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 5:29:44 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 2:35:00 PM
Lab ID: 1802E43-001
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	2/28/2018 5:29:44 PM	A49468
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	2/28/2018 5:29:44 PM	A49468
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	2/28/2018 5:29:44 PM	A49468
Surr: Toluene-d8	94.5	0	70-130		%Rec	1	2/28/2018 5:29:44 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 5:53:12 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 5:53:12 PM	36805
Surr: DNOP	108	0	77.5-161		%Rec	1	3/5/2018 5:53:12 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/1/2018 12:43:43 PM	G49481
Surr: BFB	91.2	0	69.3-150		%Rec	1	3/1/2018 12:43:43 PM	G49481
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/28/2018 1:12:55 PM	R49479
Chloride	160	5.0	10		mg/L	20	2/28/2018 1:25:20 PM	R49479
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/28/2018 1:12:55 PM	R49479
Bromide	0.39	0.073	0.50	J	mg/L	5	2/28/2018 1:12:55 PM	R49479
Nitrogen, Nitrate (As N)	0.16	0.11	0.50	J	mg/L	5	2/28/2018 1:12:55 PM	R49479
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/28/2018 1:12:55 PM	R49479
Sulfate	98	0.48	2.5		mg/L	5	2/28/2018 1:12:55 PM	R49479
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.064	0.00099	0.0020		mg/L	1	3/19/2018 9:17:40 PM	C49900
Cadmium	ND	0.0010	0.0020		mg/L	1	3/19/2018 9:17:40 PM	C49900
Calcium	2.8	0.078	1.0		mg/L	1	3/19/2018 9:17:40 PM	C49900
Chromium	ND	0.0013	0.0060		mg/L	1	3/19/2018 9:17:40 PM	C49900
Copper	ND	0.0032	0.0060		mg/L	1	3/19/2018 9:17:40 PM	C49900
Iron	0.10	0.016	0.020		mg/L	1	3/20/2018 7:13:09 PM	A49941
Magnesium	0.43	0.25	1.0	J	mg/L	1	3/19/2018 9:17:40 PM	C49900
Manganese	0.012	0.00039	0.0020		mg/L	1	3/19/2018 9:17:40 PM	C49900
Potassium	0.91	0.11	1.0	J	mg/L	1	3/19/2018 9:17:40 PM	C49900
Silver	ND	0.0018	0.0050		mg/L	1	3/19/2018 9:17:40 PM	C49900
Sodium	320	0.82	5.0		mg/L	5	3/20/2018 5:06:11 PM	A49941
Zinc	0.0088	0.0021	0.010	J	mg/L	1	3/19/2018 9:17:40 PM	C49900
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	3/14/2018 8:22:06 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:22:06 PM	36893
Chromium	0.0047	0.0018	0.0060	J	mg/L	1	3/15/2018 6:23:53 PM	36893
Copper	ND	0.0041	0.0060		mg/L	1	3/14/2018 8:22:06 PM	36893
Iron	1.8	0.051	0.10	*	mg/L	5	3/15/2018 6:25:43 PM	36893
Manganese	0.044	0.0011	0.0020		mg/L	1	3/14/2018 8:22:06 PM	36893
Silver	ND	0.0012	0.0050		mg/L	1	3/14/2018 8:22:06 PM	36893
Zinc	0.010	0.0033	0.010		mg/L	1	3/15/2018 6:23:53 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	3/12/2018 6:06:04 PM	B49741
Lead	ND	0.00017	0.00050		mg/L	1	3/12/2018 6:06:04 PM	B49741
Selenium	0.0029	0.00076	0.0010		mg/L	1	3/12/2018 6:06:04 PM	B49741
Uranium	0.033	0.00096	0.0050	*	mg/L	10	3/14/2018 1:19:42 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0027	0.0021	0.0050	J	mg/L	5	3/14/2018 11:28:27 AM	36893
Lead	ND	0.0011	0.0025		mg/L	5	3/14/2018 11:28:27 AM	36893
Selenium	ND	0.0049	0.0050		mg/L	5	3/14/2018 11:28:27 AM	36893
Uranium	0.037	0.00034	0.0025	*	mg/L	5	3/14/2018 11:28:27 AM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000053	0.000037	0.00020	J	mg/L	1	3/12/2018 4:00:09 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Acenaphthylene	ND	3.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Aniline	ND	3.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Anthracene	ND	3.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Azobenzene	ND	4.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzoic acid	32	3.9	20		µg/L	1	3/8/2018 8:39:09 PM	36823
Benzyl alcohol	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Carbazole	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Chloroaniline	ND	3.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Chlorophenol	ND	7.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Chrysene	ND	3.8	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Dibenzofuran	ND	4.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/8/2018 8:39:09 PM	36823
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Diethyl phthalate	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Fluoranthene	ND	4.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Fluorene	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Hexachloroethane	ND	1.2	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Isophorone	ND	4.4	10		µg/L	1	3/8/2018 8:39:09 PM	36823
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Methylphenol	ND	3.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/8/2018 8:39:09 PM	36823
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Naphthalene	ND	2.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Nitroaniline	ND	4.9	10		µg/L	1	3/8/2018 8:39:09 PM	36823
3-Nitroaniline	ND	4.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Nitroaniline	ND	4.0	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Nitrobenzene	ND	3.6	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2-Nitrophenol	ND	5.2	10		µg/L	1	3/8/2018 8:39:09 PM	36823
4-Nitrophenol	ND	5.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Pentachlorophenol	ND	4.9	20		µg/L	1	3/8/2018 8:39:09 PM	36823
Phenanthrene	ND	4.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Pyrene	ND	4.4	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Pyridine	ND	2.3	10		µg/L	1	3/8/2018 8:39:09 PM	36823
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/8/2018 8:39:09 PM	36823
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/8/2018 8:39:09 PM	36823
Surr: 2-Fluorophenol	58.7	0	15-114		%Rec	1	3/8/2018 8:39:09 PM	36823
Surr: Phenol-d5	47.0	0	15-97.9		%Rec	1	3/8/2018 8:39:09 PM	36823
Surr: 2,4,6-Tribromophenol	88.9	0	15-161		%Rec	1	3/8/2018 8:39:09 PM	36823
Surr: Nitrobenzene-d5	80.5	0	29.3-120		%Rec	1	3/8/2018 8:39:09 PM	36823
Surr: 2-Fluorobiphenyl	79.0	0	17.5-116		%Rec	1	3/8/2018 8:39:09 PM	36823
Surr: 4-Terphenyl-d14	46.8	0	21-92.2		%Rec	1	3/8/2018 8:39:09 PM	36823
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Toluene	0.76	0.064	1.0	J	µg/L	1	2/28/2018 5:59:05 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Methyl tert-butyl ether (MTBE)	1.8	0.24	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Acetone	ND	0.82	10		µg/L	1	2/28/2018 5:59:05 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 5:59:05 PM	A49468
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 5:59:05 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 5:59:05 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 5:59:05 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 5:59:05 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 5:59:05 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date: 2/26/2018 3:30:00 PM
Lab ID: 1802E43-002
Matrix: AQUEOUS
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	97.5	0	70-130		%Rec	1	2/28/2018 5:59:05 PM	A49468
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	2/28/2018 5:59:05 PM	A49468
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/28/2018 5:59:05 PM	A49468
Surr: Toluene-d8	99.9	0	70-130		%Rec	1	2/28/2018 5:59:05 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date:
Lab ID: 1802E43-003
Matrix: TRIP BLANK
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Toluene	ND	0.064	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Naphthalene	ND	0.11	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Acetone	ND	0.82	10		µg/L	1	2/28/2018 5:00:19 PM	A49468
Bromobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Bromoform	ND	0.21	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Bromomethane	ND	0.26	3.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
2-Butanone	ND	1.1	10		µg/L	1	2/28/2018 5:00:19 PM	A49468
Carbon disulfide	ND	0.40	10		µg/L	1	2/28/2018 5:00:19 PM	A49468
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Chloroethane	ND	0.23	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Chloroform	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Chloromethane	ND	0.29	3.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Dibromomethane	ND	0.091	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling Boundary
Collection Date:
Lab ID: 1802E43-003
Matrix: TRIP BLANK
Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
2-Hexanone	ND	0.66	10		µg/L	1	2/28/2018 5:00:19 PM	A49468
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/28/2018 5:00:19 PM	A49468
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Styrene	ND	0.16	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/28/2018 5:00:19 PM	A49468
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/28/2018 5:00:19 PM	A49468
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	2/28/2018 5:00:19 PM	A49468
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	2/28/2018 5:00:19 PM	A49468
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	2/28/2018 5:00:19 PM	A49468
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	2/28/2018 5:00:19 PM	A49468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Cadmium	0.0026	0.0020	0.002000	0	132	50	150			
Calcium	0.57	1.0	0.5000	0	114	50	150			J
Chromium	0.0069	0.0060	0.006000	0	115	50	150			
Copper	0.0048	0.0060	0.006000	0	80.3	50	150			J
Magnesium	0.56	1.0	0.5000	0	112	50	150			J
Manganese	0.0025	0.0020	0.002000	0	123	50	150			
Potassium	0.50	1.0	0.5000	0	101	50	150			J
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Zinc	0.0066	0.010	0.005000	0	132	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Calcium	47	1.0	50.00	0	94.2	85	115			
Chromium	0.51	0.0060	0.5000	0	103	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	48	1.0	50.00	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**C49900**	RunNo:	**49900**
Prep Date:		Analysis Date:	**3/19/2018**	SeqNo:	**1616050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	110	85	115			
Zinc	0.50	0.010	0.5000	0	99.4	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	97.7	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	0.0054	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Copper	0.0052	0.0060	0.006000	0	86.0	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611543** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49832**
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Zinc	0.0034	0.010								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49832**
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0059	0.0060	0.006000	0	98.5	50	150			J
Zinc	0.0056	0.010	0.005000	0	111	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49832**
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608989** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00099	0.0010	0.001000	0	98.7	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608991** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	95.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.9	85	115			

Sample ID **1802E43-002EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BW-5B**	Batch ID: **B49741**	RunNo: **49741**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1609005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.002153	92.9	70	130			
Lead	0.013	0.00050	0.01250	0	102	70	130			
Selenium	0.024	0.0010	0.02500	0.002945	84.0	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B49783**	RunNo:	**49783**					
Prep Date:		Analysis Date:	**3/14/2018**	SeqNo:	**1610860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.0	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49783**	RunNo:	**49783**					
Prep Date:		Analysis Date:	**3/14/2018**	SeqNo:	**1610861**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.1	85	115			
Uranium	0.011	0.00050	0.01250	0	90.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606839**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606840**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0014	0.0010	0.001000	0	140	50	150			
Lead	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.6	50	150			J

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609686**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609687**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00077	0.0010	0.001000	0	77.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**MSLCS-36893**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **36893**		RunNo: **49759**						
Prep Date:	**3/7/2018**	Analysis Date: **3/13/2018**		SeqNo: **1609688**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		0.022	0.0010	0.02500	0	86.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID	**MB-36955**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607730**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000040	0.00020								J

Sample ID	**LCS-36955**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607731**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49479**	RunNo: **49479**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1598519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49479**	RunNo: **49479**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1598520** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.2	90	110			
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.4	90	110			
Bromide	2.4	0.10	2.500	0	94.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.3	0.50	10.00	0	92.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49642**	RunNo: **49642**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1606296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49642**	RunNo: **49642**
Prep Date:	Analysis Date: **3/8/2018**	SeqNo: **1606297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **LCS-36805**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36805**	RunNo: **49531**
Prep Date: **3/2/2018**	Analysis Date: **3/5/2018**	SeqNo: **1600947** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.6	70	130			
Surr: DNOP	0.49		0.5000		98.8	77.5	161			

Sample ID **MB-36805**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36805**	RunNo: **49531**
Prep Date: **3/2/2018**	Analysis Date: **3/5/2018**	SeqNo: **1600948** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		111	77.5	161			

Sample ID **1802E43-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **BW-5C**	Batch ID: **36805**	RunNo: **49531**
Prep Date: **3/2/2018**	Analysis Date: **3/5/2018**	SeqNo: **1602179** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	83.3	151			
Surr: DNOP	0.51		0.5000		103	77.5	161			

Sample ID **1802E43-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **BW-5C**	Batch ID: **36805**	RunNo: **49531**
Prep Date: **3/2/2018**	Analysis Date: **3/5/2018**	SeqNo: **1602180** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	105	83.3	151	3.79	20	
Surr: DNOP	0.52		0.5000		104	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G49481**	RunNo: **49481**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599002** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		88.1	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G49481**	RunNo: **49481**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	111	75.8	123			
Surr: BFB	21		20.00		107	69.3	150			

Sample ID **1802E43-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-5C**	Batch ID: **G49481**	RunNo: **49481**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599009** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.63	0.050	0.5000	0.03420	119	52.5	149			
Surr: BFB	23		20.00		116	69.3	150			

Sample ID **1802E43-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-5C**	Batch ID: **G49481**	RunNo: **49481**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.63	0.050	0.5000	0.03420	119	52.5	149	0.0637	20	
Surr: BFB	23		20.00		117	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597712** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.30	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.4	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A49468**	RunNo: **49468**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1597713** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **1802e43-001cms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	64	10	100.0	0	63.8	15	123			
4-Chloro-3-methylphenol	160	10	200.0	0	82.1	26.6	118			
2-Chlorophenol	150	10	200.0	0	75.0	15	120			
1,4-Dichlorobenzene	67	10	100.0	0	66.8	19	108			
2,4-Dinitrotoluene	69	10	100.0	0	69.0	27.8	103			
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.3	32.3	126			
4-Nitrophenol	80	10	200.0	0	40.0	15	72.1			
Pentachlorophenol	140	20	200.0	0	68.2	15	114			
Phenol	81	10	200.0	0	40.6	15	67.5			
Pyrene	74	10	100.0	0	74.4	31.2	112			
1,2,4-Trichlorobenzene	78	10	100.0	0	77.8	22.1	123			
Surr: 2-Fluorophenol	110		200.0		53.2	15	114			
Surr: Phenol-d5	87		200.0		43.4	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.6	15	161			
Surr: Nitrobenzene-d5	77		100.0		76.7	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		73.2	17.5	116			
Surr: 4-Terphenyl-d14	47		100.0		47.4	21	92.2			

Sample ID **1802e43-001cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605962** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	64.6	15	123	1.28	30.5	
4-Chloro-3-methylphenol	160	10	200.0	0	80.8	26.6	118	1.58	50	
2-Chlorophenol	130	10	200.0	0	65.1	15	120	14.1	36.3	
1,4-Dichlorobenzene	57	10	100.0	0	56.9	19	108	15.9	42.1	
2,4-Dinitrotoluene	71	10	100.0	0	71.3	27.8	103	3.28	28.5	
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	32.3	126	7.89	25.4	
4-Nitrophenol	65	10	200.0	0	32.3	15	72.1	21.3	50	
Pentachlorophenol	130	20	200.0	0	66.1	15	114	3.14	50	
Phenol	72	10	200.0	0	36.2	15	67.5	11.7	46.1	
Pyrene	74	10	100.0	0	74.1	31.2	112	0.404	34.3	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	22.1	123	10.6	43.6	
Surr: 2-Fluorophenol	90		200.0		45.2	15	114	0	0	
Surr: Phenol-d5	75		200.0		37.3	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		78.8	15	161	0	0	
Surr: Nitrobenzene-d5	68		100.0		67.6	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	72		100.0		72.0	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **1802e43-001cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C** Batch ID: **36823** RunNo: **49662**
Prep Date: **3/5/2018** Analysis Date: **3/8/2018** SeqNo: **1605962** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	48		100.0		48.1	21	92.2	0	0	

Sample ID **lcs-36823** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **36823** RunNo: **49662**
Prep Date: **3/5/2018** Analysis Date: **3/8/2018** SeqNo: **1605966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	71.4	39.7	103			
4-Chloro-3-methylphenol	180	10	200.0	0	90.4	40.5	108			
2-Chlorophenol	160	10	200.0	0	82.1	35	103			
1,4-Dichlorobenzene	71	10	100.0	0	71.1	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.3	35.6	91.4			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.2	41.6	114			
4-Nitrophenol	100	10	200.0	0	50.9	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	74.5	25.3	98.5			
Phenol	93	10	200.0	0	46.4	20.9	75.1			
Pyrene	88	10	100.0	0	87.9	45.6	108			
1,2,4-Trichlorobenzene	81	10	100.0	0	81.1	30.3	106			
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID **mb-36823** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **36823** RunNo: **49662**
Prep Date: **3/5/2018** Analysis Date: **3/8/2018** SeqNo: **1605967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	7.6	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802E43**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling Boundary

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
Tel.: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802E43 | RcptNo: 1

Received By: Mandy Woods 2/28/2018 9:45:00 AM

Completed By: Ashley Gallegos 2/28/2018 10:20:11 AM

Reviewed By: ENM 2/28/18 labeled by: PDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? NO
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: PDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6g	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (BOUNDARY)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.6°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802E43	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	* MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/26/18	1435	WATER	BW-5C	40 ML VOA-5	HCL	-001			✓							✓						
				1 L AMBER-2	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/27/18	0700		CHUCK 2/28		
				2/28/18	0945
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (BOUNDARY)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.6°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2/26/18						1802E43
~~2/26~~	1530	WATER	BW-5B	40 mL VOA-5	HCL	-002
				1 L AMBER-1	NEAT	
				250 mL AMBER-1	NEAT	
				250 mL PLASTIC-1	HNO_3	
				125 mL PLASTIC-1	HNO_3	
				125 mL PLASTIC-1	H_2SO_4	
				125 mL PLASTIC-1	NEAT	
2/26/18	—	WATER	TRIP BLANK	40 mL VOA-3	HCL	-003

Analysis Request

	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS *			Air Bubbles (Y or N)
002			✓							✓						
											✓					
			✓													
												✓				
												✓	✓			
													✓			
													✓			
003										✓						

Date: 2/27/18 Time: 0700 Relinquished by:
Received by: COURIER 2/28 Date Time
Date: Time: Relinquished by:
Received by: 2/28/18 0945 Date Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 28, 2018

Jessica O'Brien

Andeavor Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: 1st Qtr 2018 GW Sampling MKTF OrderNo.: 1802370

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/7/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	2/12/2018 12:16:20 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.58	0.36	1.0	J	mg/L	1	2/9/2018 2:07:54 PM	36423
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/9/2018 2:07:54 PM	36423
Surr: DNOP	112	0	77.5-161		%Rec	1	2/9/2018 2:07:54 PM	36423
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	16	0.50	1.0		mg/L	20	2/8/2018 9:36:51 AM	R48995
Surr: BFB	118	0	69.3-150		%Rec	20	2/8/2018 9:36:51 AM	R48995
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/21/2018 1:25:49 PM	R49315
Chloride	520	12	25		mg/L	50	2/23/2018 6:10:41 AM	R49314
Bromide	1.2	0.073	0.50		mg/L	5	2/21/2018 1:25:49 PM	R49315
Phosphorus, Orthophosphate (As P)	2.3	1.2	2.5	JH	mg/L	5	2/21/2018 1:25:49 PM	R49315
Sulfate	27	0.48	2.5		mg/L	5	2/21/2018 1:25:49 PM	R49315
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/21/2018 3:05:04 PM	R49315
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.28	0.00099	0.0020		mg/L	1	2/8/2018 5:37:02 PM	A49000
Cadmium	ND	0.0010	0.0020		mg/L	1	2/8/2018 5:37:02 PM	A49000
Calcium	110	0.39	5.0		mg/L	5	2/8/2018 6:39:49 PM	A49000
Chromium	ND	0.0013	0.0060		mg/L	1	2/8/2018 5:37:02 PM	A49000
Copper	ND	0.0032	0.0060		mg/L	1	2/8/2018 5:37:02 PM	A49000
Iron	0.70	0.016	0.020	*	mg/L	1	2/8/2018 5:37:02 PM	A49000
Magnesium	18	0.25	1.0		mg/L	1	2/8/2018 5:37:02 PM	A49000
Manganese	2.6	0.0020	0.010	*	mg/L	5	2/8/2018 6:39:49 PM	A49000
Potassium	0.81	0.11	1.0	J	mg/L	1	2/8/2018 5:37:02 PM	A49000
Silver	0.0023	0.0018	0.0050	J	mg/L	1	2/8/2018 5:37:02 PM	A49000
Sodium	520	1.6	10		mg/L	10	2/8/2018 6:41:52 PM	A49000
Zinc	0.0074	0.0021	0.010	J	mg/L	1	2/8/2018 5:37:02 PM	A49000
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.42	0.0010	0.0020		mg/L	1	2/12/2018 6:04:43 PM	36437
Cadmium	ND	0.00058	0.0020		mg/L	1	2/12/2018 6:04:43 PM	36437
Chromium	ND	0.0018	0.0060		mg/L	1	2/12/2018 6:04:43 PM	36437
Copper	0.012	0.0041	0.0060		mg/L	1	2/12/2018 6:04:43 PM	36437
Iron	4.3	0.051	0.10	*	mg/L	5	2/13/2018 8:14:28 PM	36437
Manganese	3.2	0.0055	0.010	*	mg/L	5	2/12/2018 10:12:10 PM	36437
Silver	0.0036	0.0012	0.0050	J	mg/L	1	2/12/2018 6:04:43 PM	36437
Zinc	0.011	0.0033	0.010		mg/L	1	2/12/2018 6:04:43 PM	36437

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0041	0.0021	0.0050	J	mg/L	5	2/16/2018 8:30:29 PM	C49190
Lead	0.00024	0.00017	0.00050	J	mg/L	1	2/9/2018 6:57:39 PM	C49035
Selenium	ND	0.0038	0.0050		mg/L	5	2/16/2018 8:30:29 PM	C49190
Uranium	0.023	0.00048	0.0025		mg/L	5	2/16/2018 8:30:29 PM	C49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0035	0.0021	0.0050	J	mg/L	5	2/12/2018 10:45:09 AM	36437
Lead	0.0062	0.0011	0.0025		mg/L	5	2/12/2018 10:45:09 AM	36437
Selenium	ND	0.0098	0.010		mg/L	10	2/19/2018 12:33:30 PM	36437
Uranium	0.028	0.00034	0.0025		mg/L	5	2/12/2018 10:45:09 AM	36437
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000067	0.000037	0.00020	J	mg/L	1	2/21/2018 11:05:10 AM	36617
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Acenaphthylene	ND	3.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Aniline	ND	3.1	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Anthracene	ND	3.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Azobenzene	ND	4.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Benzoic acid	18	3.9	20	J	µg/L	1	2/9/2018 10:48:12 AM	36419
Benzyl alcohol	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Carbazole	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Chloroaniline	ND	3.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2-Chlorophenol	ND	7.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Chrysene	ND	3.8	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Dibenzofuran	ND	4.1	10		µg/L	1	2/9/2018 10:48:12 AM	36419
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/9/2018 10:48:12 AM	36419
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 10:48:12 AM	36419
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Diethyl phthalate	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Fluoranthene	ND	4.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Fluorene	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Hexachloroethane	ND	1.2	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Isophorone	ND	4.4	10		µg/L	1	2/9/2018 10:48:12 AM	36419
1-Methylnaphthalene	8.5	3.3	10	J	µg/L	1	2/9/2018 10:48:12 AM	36419
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2-Methylphenol	ND	3.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/9/2018 10:48:12 AM	36419
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Naphthalene	5.3	2.9	10	J	µg/L	1	2/9/2018 10:48:12 AM	36419
2-Nitroaniline	ND	4.9	10		µg/L	1	2/9/2018 10:48:12 AM	36419
3-Nitroaniline	ND	4.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Nitroaniline	ND	4.0	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Nitrobenzene	ND	3.6	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2-Nitrophenol	ND	5.2	10		µg/L	1	2/9/2018 10:48:12 AM	36419
4-Nitrophenol	ND	5.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Pentachlorophenol	ND	4.9	20		µg/L	1	2/9/2018 10:48:12 AM	36419
Phenanthrene	ND	4.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	6.8	3.1	10	J	µg/L	1	2/9/2018 10:48:12 AM	36419
Pyrene	ND	4.4	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Pyridine	ND	2.3	10		µg/L	1	2/9/2018 10:48:12 AM	36419
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/9/2018 10:48:12 AM	36419
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/9/2018 10:48:12 AM	36419
Surr: 2-Fluorophenol	68.0	0	15-114		%Rec	1	2/9/2018 10:48:12 AM	36419
Surr: Phenol-d5	53.4	0	15-97.9		%Rec	1	2/9/2018 10:48:12 AM	36419
Surr: 2,4,6-Tribromophenol	99.4	0	15-161		%Rec	1	2/9/2018 10:48:12 AM	36419
Surr: Nitrobenzene-d5	90.3	0	29.3-120		%Rec	1	2/9/2018 10:48:12 AM	36419
Surr: 2-Fluorobiphenyl	87.8	0	17.5-116		%Rec	1	2/9/2018 10:48:12 AM	36419
Surr: 4-Terphenyl-d14	110	0	21-92.2	S	%Rec	1	2/9/2018 10:48:12 AM	36419
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2000	3.1	50		µg/L	50	2/12/2018 1:59:00 PM	R49067
Toluene	10	0.32	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Ethylbenzene	110	0.47	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Methyl tert-butyl ether (MTBE)	250	1.2	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2,4-Trimethylbenzene	4.0	0.56	5.0	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
1,3,5-Trimethylbenzene	0.50	0.44	5.0	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2-Dichloroethane (EDC)	10	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Naphthalene	4.5	0.57	10	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
1-Methylnaphthalene	4.3	0.80	20	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
2-Methylnaphthalene	ND	0.76	20		µg/L	5	2/12/2018 2:23:00 PM	R49067
Acetone	25	4.1	50	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
Bromobenzene	ND	0.70	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Bromodichloromethane	ND	0.88	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Bromoform	ND	1.1	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Bromomethane	ND	1.3	15		µg/L	5	2/12/2018 2:23:00 PM	R49067
2-Butanone	ND	5.7	50		µg/L	5	2/12/2018 2:23:00 PM	R49067
Carbon disulfide	ND	2.0	50		µg/L	5	2/12/2018 2:23:00 PM	R49067
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Chlorobenzene	ND	0.53	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Chloroethane	ND	1.2	10		µg/L	5	2/12/2018 2:23:00 PM	R49067
Chloroform	ND	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Chloromethane	ND	1.5	15		µg/L	5	2/12/2018 2:23:00 PM	R49067
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
cis-1,2-DCE	50	1.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	2/12/2018 2:23:00 PM	R49067
Dibromochloromethane	ND	0.36	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Dibromomethane	ND	0.45	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1-Dichloroethane	220	2.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1-Dichloroethene	110	0.40	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
2,2-Dichloropropane	ND	0.79	10		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
2-Hexanone	ND	3.3	50		µg/L	5	2/12/2018 2:23:00 PM	R49067
Isopropylbenzene	44	0.26	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
4-Isopropyltoluene	1.3	0.48	5.0	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	2/12/2018 2:23:00 PM	R49067
Methylene Chloride	ND	0.54	15		µg/L	5	2/12/2018 2:23:00 PM	R49067
n-Butylbenzene	15	0.65	15	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
n-Propylbenzene	45	0.37	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
sec-Butylbenzene	6.9	0.55	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Styrene	ND	0.78	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	2/12/2018 2:23:00 PM	R49067
Tetrachloroethene (PCE)	2.3	0.65	5.0	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1,1-Trichloroethane	14	0.36	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Trichloroethene (TCE)	25	0.56	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	2/12/2018 2:23:00 PM	R49067
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	2/12/2018 2:23:00 PM	R49067
Vinyl chloride	3.0	0.89	5.0	J	µg/L	5	2/12/2018 2:23:00 PM	R49067
Xylenes, Total	9.7	1.6	7.5		µg/L	5	2/12/2018 2:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 12:40:00 PM
Lab ID: 1802370-001
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	83.3	0	70-130		%Rec	5	2/12/2018 2:23:00 PM	R49067
Surr: 4-Bromofluorobenzene	78.1	0	70-130		%Rec	5	2/12/2018 2:23:00 PM	R49067
Surr: Dibromofluoromethane	88.5	0	70-130		%Rec	5	2/12/2018 2:23:00 PM	R49067
Surr: Toluene-d8	87.5	0	70-130		%Rec	5	2/12/2018 2:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0079	0.0049	0.0095	J	µg/L	1	2/12/2018 12:31:24 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.36	1.0		mg/L	1	2/9/2018 3:30:48 PM	36423
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/9/2018 3:30:48 PM	36423
Surr: DNOP	107	0	77.5-161		%Rec	1	2/9/2018 3:30:48 PM	36423
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.19	0.025	0.050		mg/L	1	2/8/2018 10:48:01 AM	R48995
Surr: BFB	115	0	69.3-150		%Rec	1	2/8/2018 10:48:01 AM	R48995
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/21/2018 1:50:39 PM	R49315
Chloride	750	12	25		mg/L	50	2/23/2018 6:23:06 AM	R49314
Bromide	1.4	0.073	0.50		mg/L	5	2/21/2018 1:50:39 PM	R49315
Phosphorus, Orthophosphate (As P)	1.6	1.2	2.5	JH	mg/L	5	2/21/2018 1:50:39 PM	R49315
Sulfate	63	0.48	2.5		mg/L	5	2/21/2018 1:50:39 PM	R49315
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/21/2018 3:54:41 PM	R49315
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.12	0.00099	0.0020		mg/L	1	2/8/2018 5:38:52 PM	A49000
Cadmium	ND	0.0010	0.0020		mg/L	1	2/8/2018 5:38:52 PM	A49000
Calcium	140	0.39	5.0		mg/L	5	2/8/2018 6:43:57 PM	A49000
Chromium	ND	0.0013	0.0060		mg/L	1	2/8/2018 5:38:52 PM	A49000
Copper	ND	0.0032	0.0060		mg/L	1	2/8/2018 5:38:52 PM	A49000
Iron	ND	0.016	0.020		mg/L	1	2/8/2018 5:38:52 PM	A49000
Magnesium	28	0.25	1.0		mg/L	1	2/8/2018 5:38:52 PM	A49000
Manganese	0.028	0.00039	0.0020		mg/L	1	2/8/2018 5:38:52 PM	A49000
Potassium	1.1	0.11	1.0		mg/L	1	2/8/2018 5:38:52 PM	A49000
Silver	0.0035	0.0018	0.0050	J	mg/L	1	2/8/2018 5:38:52 PM	A49000
Sodium	500	1.6	10		mg/L	10	2/8/2018 6:51:56 PM	A49000
Zinc	0.0052	0.0021	0.010	J	mg/L	1	2/8/2018 5:38:52 PM	A49000
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	2/12/2018 6:06:35 PM	36437
Cadmium	ND	0.00058	0.0020		mg/L	1	2/12/2018 6:06:35 PM	36437
Chromium	ND	0.0018	0.0060		mg/L	1	2/12/2018 6:06:35 PM	36437
Copper	ND	0.0041	0.0060		mg/L	1	2/12/2018 6:06:35 PM	36437
Iron	2.0	0.051	0.10	*	mg/L	5	2/13/2018 8:16:18 PM	36437
Manganese	0.097	0.0011	0.0020	*	mg/L	1	2/12/2018 6:06:35 PM	36437
Silver	0.0052	0.0012	0.0050		mg/L	1	2/12/2018 6:06:35 PM	36437
Zinc	0.0068	0.0033	0.010	J	mg/L	1	2/12/2018 6:06:35 PM	36437

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0032	0.0021	0.0050	J	mg/L	5	2/16/2018 8:50:11 PM	C49190
Lead	ND	0.00017	0.00050		mg/L	1	2/9/2018 7:23:59 PM	C49035
Selenium	0.0056	0.0038	0.0050		mg/L	5	2/16/2018 8:50:11 PM	C49190
Uranium	0.039	0.00048	0.0025	*	mg/L	5	2/16/2018 8:50:11 PM	C49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/12/2018 10:49:51 AM	36437
Lead	0.0021	0.0011	0.0025	J	mg/L	5	2/12/2018 10:49:51 AM	36437
Selenium	ND	0.0049	0.0050		mg/L	5	2/22/2018 6:21:04 PM	36437
Uranium	0.044	0.00034	0.0025	*	mg/L	5	2/12/2018 10:49:51 AM	36437
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000037	0.00020	J	mg/L	1	2/21/2018 11:07:08 AM	36617
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Acenaphthylene	ND	3.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Aniline	ND	3.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Anthracene	ND	3.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Azobenzene	ND	4.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Benzoic acid	8.6	3.9	20	J	µg/L	1	2/9/2018 12:12:11 PM	36419
Benzyl alcohol	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Carbazole	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Chloroaniline	ND	3.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Chlorophenol	ND	7.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Chrysene	ND	3.8	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002 **Matrix:** AQUEOUS **Received Date:** 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Dibenzofuran	ND	4.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/9/2018 12:12:11 PM	36419
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Diethyl phthalate	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Fluoranthene	ND	4.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Fluorene	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Hexachloroethane	ND	1.2	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Isophorone	ND	4.4	10		µg/L	1	2/9/2018 12:12:11 PM	36419
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Methylphenol	ND	3.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/9/2018 12:12:11 PM	36419
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Naphthalene	ND	2.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Nitroaniline	ND	4.9	10		µg/L	1	2/9/2018 12:12:11 PM	36419
3-Nitroaniline	ND	4.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Nitroaniline	ND	4.0	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Nitrobenzene	ND	3.6	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2-Nitrophenol	ND	5.2	10		µg/L	1	2/9/2018 12:12:11 PM	36419
4-Nitrophenol	ND	5.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Pentachlorophenol	ND	4.9	20		µg/L	1	2/9/2018 12:12:11 PM	36419
Phenanthrene	ND	4.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	3.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Pyrene	ND	4.4	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Pyridine	ND	2.3	10		µg/L	1	2/9/2018 12:12:11 PM	36419
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/9/2018 12:12:11 PM	36419
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/9/2018 12:12:11 PM	36419
Surr: 2-Fluorophenol	55.7	0	15-114		%Rec	1	2/9/2018 12:12:11 PM	36419
Surr: Phenol-d5	42.0	0	15-97.9		%Rec	1	2/9/2018 12:12:11 PM	36419
Surr: 2,4,6-Tribromophenol	81.2	0	15-161		%Rec	1	2/9/2018 12:12:11 PM	36419
Surr: Nitrobenzene-d5	74.1	0	29.3-120		%Rec	1	2/9/2018 12:12:11 PM	36419
Surr: 2-Fluorobiphenyl	69.1	0	17.5-116		%Rec	1	2/9/2018 12:12:11 PM	36419
Surr: 4-Terphenyl-d14	79.0	0	21-92.2		%Rec	1	2/9/2018 12:12:11 PM	36419
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.3	0.062	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Methyl tert-butyl ether (MTBE)	85	0.24	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2-Dichloroethane (EDC)	26	0.40	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Acetone	2.7	0.82	10	J	µg/L	1	2/12/2018 3:35:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 3:35:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 3:35:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Chloroform	0.63	0.40	1.0	J	µg/L	1	2/12/2018 3:35:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
cis-1,2-DCE	1.9	0.20	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1-Dichloroethane	44	0.40	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1-Dichloroethene	91	0.081	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 3:35:00 PM	R49067
Isopropylbenzene	1.7	0.051	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 3:35:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
n-Butylbenzene	0.41	0.13	3.0	J	µg/L	1	2/12/2018 3:35:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
sec-Butylbenzene	0.55	0.11	1.0	J	µg/L	1	2/12/2018 3:35:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1,1-Trichloroethane	5.6	0.073	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,1,2-Trichloroethane	2.9	0.14	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Trichloroethene (TCE)	5.6	0.11	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 3:35:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 3:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 2:05:00 PM
Lab ID: 1802370-002
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	84.3	0	70-130		%Rec	1	2/12/2018 3:35:00 PM	R49067
Surr: 4-Bromofluorobenzene	78.9	0	70-130		%Rec	1	2/12/2018 3:35:00 PM	R49067
Surr: Dibromofluoromethane	88.9	0	70-130		%Rec	1	2/12/2018 3:35:00 PM	R49067
Surr: Toluene-d8	86.4	0	70-130		%Rec	1	2/12/2018 3:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.36	1.0		mg/L	1	2/9/2018 3:58:53 PM	36423
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/9/2018 3:58:53 PM	36423
Surr: DNOP	107	0	77.5-161		%Rec	1	2/9/2018 3:58:53 PM	36423
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	2/8/2018 11:11:53 AM	R48995
Surr: BFB	93.0	0	69.3-150		%Rec	1	2/8/2018 11:11:53 AM	R48995
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/21/2018 2:15:28 PM	R49315
Chloride	4000	120	250		mg/L	500	2/23/2018 6:47:55 AM	R49314
Bromide	1.2	0.073	0.50		mg/L	5	2/21/2018 2:15:28 PM	R49315
Phosphorus, Orthophosphate (As P)	1.9	1.2	2.5	JH	mg/L	5	2/21/2018 2:15:28 PM	R49315
Sulfate	480	1.9	10		mg/L	20	2/21/2018 2:27:51 PM	R49315
Nitrate+Nitrite as N	ND	0.52	4.0		mg/L	20	2/23/2018 7:00:20 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.080	0.00099	0.0020		mg/L	1	2/8/2018 5:40:58 PM	A49000
Cadmium	ND	0.0010	0.0020		mg/L	1	2/8/2018 5:40:58 PM	A49000
Calcium	360	0.39	5.0		mg/L	5	2/8/2018 6:54:07 PM	A49000
Chromium	ND	0.0013	0.0060		mg/L	1	2/8/2018 5:40:58 PM	A49000
Copper	0.0033	0.0032	0.0060	J	mg/L	1	2/8/2018 5:40:58 PM	A49000
Iron	ND	0.016	0.020		mg/L	1	2/8/2018 5:40:58 PM	A49000
Magnesium	65	0.25	1.0		mg/L	1	2/8/2018 5:40:58 PM	A49000
Manganese	0.060	0.00039	0.0020	*	mg/L	1	2/8/2018 5:40:58 PM	A49000
Potassium	6.2	0.11	1.0		mg/L	1	2/8/2018 5:40:58 PM	A49000
Silver	0.0082	0.0018	0.0050		mg/L	1	2/8/2018 5:40:58 PM	A49000
Sodium	2500	8.2	50		mg/L	50	2/8/2018 6:56:16 PM	A49000
Zinc	0.0034	0.0021	0.010	J	mg/L	1	2/8/2018 5:40:58 PM	A49000
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.17	0.0010	0.0020		mg/L	1	2/12/2018 6:08:28 PM	36437
Cadmium	ND	0.00058	0.0020		mg/L	1	2/12/2018 6:08:28 PM	36437
Chromium	ND	0.0018	0.0060		mg/L	1	2/12/2018 6:08:28 PM	36437
Copper	0.0060	0.0041	0.0060		mg/L	1	2/12/2018 6:08:28 PM	36437
Iron	4.3	0.051	0.10	*	mg/L	5	2/13/2018 8:18:20 PM	36437
Manganese	0.20	0.0011	0.0020	*	mg/L	1	2/12/2018 6:08:28 PM	36437
Silver	0.011	0.0012	0.0050		mg/L	1	2/12/2018 6:08:28 PM	36437
Zinc	0.016	0.0033	0.010		mg/L	1	2/12/2018 6:08:28 PM	36437
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	ND	0.021	0.050		mg/L	50	2/16/2018 9:00:02 PM	C49190

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Lead	ND	0.0087	0.025		mg/L	50	2/16/2018 9:00:02 PM	C49190
Selenium	0.012	0.0038	0.0050		mg/L	5	2/16/2018 8:55:07 PM	C49190
Uranium	0.044	0.0048	0.025	*	mg/L	50	2/16/2018 9:00:02 PM	C49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/12/2018 10:54:34 AM	36437
Lead	0.0062	0.0011	0.0025		mg/L	5	2/12/2018 10:54:34 AM	36437
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:24:07 PM	36437
Uranium	0.054	0.00034	0.0025	*	mg/L	5	2/12/2018 10:54:34 AM	36437
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000087	0.000037	0.00020	J	mg/L	1	2/21/2018 11:09:08 AM	36617
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Acenaphthylene	ND	3.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Aniline	ND	3.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Anthracene	ND	3.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Azobenzene	ND	4.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Benzoic acid	4.6	3.9	20	J	µg/L	1	2/9/2018 12:40:20 PM	36419
Benzyl alcohol	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Carbazole	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Chloroaniline	ND	3.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Chlorophenol	ND	7.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Chrysene	ND	3.8	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/9/2018 12:40:20 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Dibenzofuran	ND	4.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/9/2018 12:40:20 PM	36419
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Diethyl phthalate	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Fluoranthene	ND	4.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Fluorene	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Hexachloroethane	ND	1.2	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Isophorone	ND	4.4	10		µg/L	1	2/9/2018 12:40:20 PM	36419
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Methylphenol	ND	3.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/9/2018 12:40:20 PM	36419
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Naphthalene	ND	2.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Nitroaniline	ND	4.9	10		µg/L	1	2/9/2018 12:40:20 PM	36419
3-Nitroaniline	ND	4.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Nitroaniline	ND	4.0	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Nitrobenzene	ND	3.6	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2-Nitrophenol	ND	5.2	10		µg/L	1	2/9/2018 12:40:20 PM	36419
4-Nitrophenol	ND	5.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Pentachlorophenol	ND	4.9	20		µg/L	1	2/9/2018 12:40:20 PM	36419
Phenanthrene	ND	4.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Phenol	ND	3.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	4.4	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Pyridine	ND	2.3	10		µg/L	1	2/9/2018 12:40:20 PM	36419
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/9/2018 12:40:20 PM	36419
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/9/2018 12:40:20 PM	36419
Surr: 2-Fluorophenol	61.8	0	15-114		%Rec	1	2/9/2018 12:40:20 PM	36419
Surr: Phenol-d5	45.8	0	15-97.9		%Rec	1	2/9/2018 12:40:20 PM	36419
Surr: 2,4,6-Tribromophenol	96.6	0	15-161		%Rec	1	2/9/2018 12:40:20 PM	36419
Surr: Nitrobenzene-d5	79.1	0	29.3-120		%Rec	1	2/9/2018 12:40:20 PM	36419
Surr: 2-Fluorobiphenyl	72.6	0	17.5-116		%Rec	1	2/9/2018 12:40:20 PM	36419
Surr: 4-Terphenyl-d14	95.7	0	21-92.2	S	%Rec	1	2/9/2018 12:40:20 PM	36419
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.19	0.062	1.0	J	µg/L	1	2/12/2018 3:59:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Methyl tert-butyl ether (MTBE)	0.53	0.24	1.0	J	µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 3:59:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 3:59:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 3:59:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1-Dichloroethane	0.80	0.40	1.0	J	µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 3:59:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 3:59:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 3:59:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 3:59:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	86.3	0	70-130		%Rec	1	2/12/2018 3:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018 3:25:00 PM
Lab ID: 1802370-003
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	78.1	0	70-130		%Rec	1	2/12/2018 3:59:00 PM	R49067
Surr: Dibromofluoromethane	90.9	0	70-130		%Rec	1	2/12/2018 3:59:00 PM	R49067
Surr: Toluene-d8	85.2	0	70-130		%Rec	1	2/12/2018 3:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	2/12/2018 12:46:33 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.57	0.36	1.0	J	mg/L	1	2/9/2018 4:26:58 PM	36423
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/9/2018 4:26:58 PM	36423
Surr: DNOP	106	0	77.5-161		%Rec	1	2/9/2018 4:26:58 PM	36423
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	16	0.50	1.0		mg/L	20	2/8/2018 11:35:45 AM	R48995
Surr: BFB	120	0	69.3-150		%Rec	20	2/8/2018 11:35:45 AM	R48995
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/21/2018 2:40:16 PM	R49315
Chloride	490	12	25		mg/L	50	2/23/2018 6:35:30 AM	R49314
Bromide	1.2	0.073	0.50		mg/L	5	2/21/2018 2:40:16 PM	R49315
Phosphorus, Orthophosphate (As P)	2.3	1.2	2.5	JH	mg/L	5	2/21/2018 2:40:16 PM	R49315
Sulfate	28	0.48	2.5		mg/L	5	2/21/2018 2:40:16 PM	R49315
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/21/2018 4:19:30 PM	R49315
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.27	0.00099	0.0020		mg/L	1	2/8/2018 5:43:05 PM	A49000
Cadmium	ND	0.0010	0.0020		mg/L	1	2/8/2018 5:43:05 PM	A49000
Calcium	110	0.39	5.0		mg/L	5	2/8/2018 6:58:27 PM	A49000
Chromium	ND	0.0013	0.0060		mg/L	1	2/8/2018 5:43:05 PM	A49000
Copper	ND	0.0032	0.0060		mg/L	1	2/8/2018 5:43:05 PM	A49000
Iron	0.69	0.016	0.020	*	mg/L	1	2/8/2018 5:43:05 PM	A49000
Magnesium	18	0.25	1.0		mg/L	1	2/8/2018 5:43:05 PM	A49000
Manganese	2.6	0.0020	0.010	*	mg/L	5	2/8/2018 6:58:27 PM	A49000
Potassium	0.79	0.11	1.0	J	mg/L	1	2/8/2018 5:43:05 PM	A49000
Silver	0.0024	0.0018	0.0050	J	mg/L	1	2/8/2018 5:43:05 PM	A49000
Sodium	530	1.6	10		mg/L	10	2/8/2018 7:00:29 PM	A49000
Zinc	0.0064	0.0021	0.010	J	mg/L	1	2/8/2018 5:43:05 PM	A49000
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.42	0.0010	0.0020		mg/L	1	2/12/2018 6:10:22 PM	36437
Cadmium	ND	0.00058	0.0020		mg/L	1	2/12/2018 6:10:22 PM	36437
Chromium	0.0023	0.0018	0.0060	J	mg/L	1	2/12/2018 6:10:22 PM	36437
Copper	0.012	0.0041	0.0060		mg/L	1	2/12/2018 6:10:22 PM	36437
Iron	4.4	0.051	0.10	*	mg/L	5	2/13/2018 8:27:50 PM	36437
Manganese	3.1	0.0055	0.010	*	mg/L	5	2/12/2018 10:23:32 PM	36437
Silver	0.0036	0.0012	0.0050	J	mg/L	1	2/12/2018 6:10:22 PM	36437
Zinc	0.012	0.0033	0.010		mg/L	1	2/12/2018 6:10:22 PM	36437

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0033	0.0021	0.0050	J	mg/L	5	2/16/2018 9:04:57 PM	C49190
Lead	0.00029	0.00017	0.00050	J	mg/L	1	2/9/2018 7:37:07 PM	C49035
Selenium	ND	0.0038	0.0050		mg/L	5	2/16/2018 9:04:57 PM	C49190
Uranium	0.023	0.00048	0.0025		mg/L	5	2/16/2018 9:04:57 PM	C49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	2/12/2018 10:59:17 AM	36437
Lead	0.0067	0.0011	0.0025		mg/L	5	2/12/2018 10:59:17 AM	36437
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:27:09 PM	36437
Uranium	0.026	0.00034	0.0025		mg/L	5	2/12/2018 10:59:17 AM	36437
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000037	0.00020	J	mg/L	1	2/21/2018 11:11:07 AM	36617
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Acenaphthylene	ND	3.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Aniline	ND	3.1	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Anthracene	ND	3.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Azobenzene	ND	4.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Benzoic acid	10	3.9	20	J	µg/L	1	2/9/2018 1:08:22 PM	36419
Benzyl alcohol	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Carbazole	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Chloroaniline	ND	3.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2-Chlorophenol	ND	7.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Chrysene	ND	3.8	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Dibenzofuran	ND	4.1	10		µg/L	1	2/9/2018 1:08:22 PM	36419
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/9/2018 1:08:22 PM	36419
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 1:08:22 PM	36419
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Diethyl phthalate	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Fluoranthene	ND	4.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Fluorene	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Hexachloroethane	ND	1.2	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Isophorone	ND	4.4	10		µg/L	1	2/9/2018 1:08:22 PM	36419
1-Methylnaphthalene	8.8	3.3	10	J	µg/L	1	2/9/2018 1:08:22 PM	36419
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2-Methylphenol	ND	3.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/9/2018 1:08:22 PM	36419
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Naphthalene	4.7	2.9	10	J	µg/L	1	2/9/2018 1:08:22 PM	36419
2-Nitroaniline	ND	4.9	10		µg/L	1	2/9/2018 1:08:22 PM	36419
3-Nitroaniline	ND	4.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Nitroaniline	ND	4.0	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Nitrobenzene	ND	3.6	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2-Nitrophenol	ND	5.2	10		µg/L	1	2/9/2018 1:08:22 PM	36419
4-Nitrophenol	ND	5.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Pentachlorophenol	ND	4.9	20		µg/L	1	2/9/2018 1:08:22 PM	36419
Phenanthrene	ND	4.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	6.6	3.1	10	J	µg/L	1	2/9/2018 1:08:22 PM	36419
Pyrene	ND	4.4	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Pyridine	ND	2.3	10		µg/L	1	2/9/2018 1:08:22 PM	36419
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/9/2018 1:08:22 PM	36419
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/9/2018 1:08:22 PM	36419
Surr: 2-Fluorophenol	64.4	0	15-114		%Rec	1	2/9/2018 1:08:22 PM	36419
Surr: Phenol-d5	46.8	0	15-97.9		%Rec	1	2/9/2018 1:08:22 PM	36419
Surr: 2,4,6-Tribromophenol	98.9	0	15-161		%Rec	1	2/9/2018 1:08:22 PM	36419
Surr: Nitrobenzene-d5	87.8	0	29.3-120		%Rec	1	2/9/2018 1:08:22 PM	36419
Surr: 2-Fluorobiphenyl	85.5	0	17.5-116		%Rec	1	2/9/2018 1:08:22 PM	36419
Surr: 4-Terphenyl-d14	81.3	0	21-92.2		%Rec	1	2/9/2018 1:08:22 PM	36419
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2000	3.1	50		µg/L	50	2/12/2018 4:23:00 PM	R49067
Toluene	10	0.32	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Ethylbenzene	110	0.47	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Methyl tert-butyl ether (MTBE)	250	1.2	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2,4-Trimethylbenzene	3.9	0.56	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
1,3,5-Trimethylbenzene	0.47	0.44	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2-Dichloroethane (EDC)	9.4	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Naphthalene	4.2	0.57	10	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
1-Methylnaphthalene	4.2	0.80	20	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
2-Methylnaphthalene	ND	0.76	20		µg/L	5	2/12/2018 4:47:00 PM	R49067
Acetone	28	4.1	50	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
Bromobenzene	ND	0.70	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Bromodichloromethane	ND	0.88	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Bromoform	ND	1.1	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Bromomethane	ND	1.3	15		µg/L	5	2/12/2018 4:47:00 PM	R49067
2-Butanone	ND	5.7	50		µg/L	5	2/12/2018 4:47:00 PM	R49067
Carbon disulfide	ND	2.0	50		µg/L	5	2/12/2018 4:47:00 PM	R49067
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Chlorobenzene	ND	0.53	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Chloroethane	ND	1.2	10		µg/L	5	2/12/2018 4:47:00 PM	R49067
Chloroform	ND	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Chloromethane	ND	1.5	15		µg/L	5	2/12/2018 4:47:00 PM	R49067
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
cis-1,2-DCE	51	1.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	2/12/2018 4:47:00 PM	R49067
Dibromochloromethane	ND	0.36	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Dibromomethane	ND	0.45	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1-Dichloroethane	230	2.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1-Dichloroethene	110	0.40	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
2,2-Dichloropropane	ND	0.79	10		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
2-Hexanone	ND	3.3	50		µg/L	5	2/12/2018 4:47:00 PM	R49067
Isopropylbenzene	44	0.26	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
4-Isopropyltoluene	1.2	0.48	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	2/12/2018 4:47:00 PM	R49067
Methylene Chloride	ND	0.54	15		µg/L	5	2/12/2018 4:47:00 PM	R49067
n-Butylbenzene	15	0.65	15	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
n-Propylbenzene	44	0.37	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
sec-Butylbenzene	6.9	0.55	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Styrene	ND	0.78	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	2/12/2018 4:47:00 PM	R49067
Tetrachloroethene (PCE)	2.3	0.65	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1,1-Trichloroethane	15	0.36	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,1,2-Trichloroethane	1.7	0.70	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
Trichloroethene (TCE)	25	0.56	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	2/12/2018 4:47:00 PM	R49067
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	2/12/2018 4:47:00 PM	R49067
Vinyl chloride	3.0	0.89	5.0	J	µg/L	5	2/12/2018 4:47:00 PM	R49067
Xylenes, Total	9.2	1.6	7.5		µg/L	5	2/12/2018 4:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/5/2018
Lab ID: 1802370-004
Matrix: AQUEOUS
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	85.3	0	70-130		%Rec	5	2/12/2018 4:47:00 PM	R49067
Surr: 4-Bromofluorobenzene	77.6	0	70-130		%Rec	5	2/12/2018 4:47:00 PM	R49067
Surr: Dibromofluoromethane	89.5	0	70-130		%Rec	5	2/12/2018 4:47:00 PM	R49067
Surr: Toluene-d8	86.6	0	70-130		%Rec	5	2/12/2018 4:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802370-005
Matrix: TRIP BLANK
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.35	0.062	1.0	J	µg/L	1	2/12/2018 5:11:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 5:11:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 5:11:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 5:11:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802370-005
Matrix: TRIP BLANK
Received Date: 2/7/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 5:11:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 5:11:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 5:11:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 5:11:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	85.5	0	70-130		%Rec	1	2/12/2018 5:11:00 PM	R49067
Surr: 4-Bromofluorobenzene	78.2	0	70-130		%Rec	1	2/12/2018 5:11:00 PM	R49067
Surr: Dibromofluoromethane	88.3	0	70-130		%Rec	1	2/12/2018 5:11:00 PM	R49067
Surr: Toluene-d8	87.3	0	70-130		%Rec	1	2/12/2018 5:11:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49000**	RunNo: **49000**
Prep Date:	Analysis Date: **2/8/2018**	SeqNo: **1577020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	0.0015	0.0060								J
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49000**	RunNo: **49000**
Prep Date:	Analysis Date: **2/8/2018**	SeqNo: **1577021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0066	0.0060	0.006000	0	110	50	150			
Copper	0.0059	0.0060	0.006000	0	98.7	50	150			J
Iron	0.018	0.020	0.02000	0	89.5	50	150			J
Magnesium	0.49	1.0	0.5000	0	97.5	50	150			J
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Potassium	0.45	1.0	0.5000	0	89.6	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Sodium	0.43	1.0	0.5000	0	86.7	50	150			J
Zinc	0.0046	0.010	0.005000	0	91.8	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49000**	RunNo: **49000**
Prep Date:	Analysis Date: **2/8/2018**	SeqNo: **1577022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.9	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	48	1.0	50.00	0	96.0	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49000**	RunNo: **49000**
Prep Date:	Analysis Date: **2/8/2018**	SeqNo: **1577022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	48	1.0	50.00	0	96.4	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Potassium	47	1.0	50.00	0	94.0	85	115			
Silver	0.11	0.0050	0.1000	0	109	85	115			
Sodium	47	1.0	50.00	0	94.4	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-36437**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36437**	RunNo: **49061**
Prep Date: **2/8/2018**	Analysis Date: **2/12/2018**	SeqNo: **1579858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36437**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36437**	RunNo: **49061**
Prep Date: **2/8/2018**	Analysis Date: **2/12/2018**	SeqNo: **1579859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	87.0	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.0	50	150			J
Copper	0.0069	0.0060	0.006000	0	114	50	150			
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Silver	0.0054	0.0050	0.005000	0	109	50	150			
Zinc	0.0053	0.010	0.005000	0	105	50	150			J

Sample ID **LCS-36437**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36437**	RunNo: **49061**
Prep Date: **2/8/2018**	Analysis Date: **2/12/2018**	SeqNo: **1579860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Chromium	0.47	0.0060	0.5000	0	93.6	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.48	0.010	0.5000	0	95.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**LLLCS-36437**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**36437**		RunNo:	**49061**				
Prep Date:	**2/8/2018**	Analysis Date:	**2/12/2018**		SeqNo:	**1580126**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49035**	RunNo: **49035**
Prep Date:	Analysis Date: **2/9/2018**	SeqNo: **1578417** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49035**	RunNo: **49035**
Prep Date:	Analysis Date: **2/9/2018**	SeqNo: **1578418** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00051	0.00050	0.0005000	0	101	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49035**	RunNo: **49035**
Prep Date:	Analysis Date: **2/9/2018**	SeqNo: **1578419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.011	0.00050	0.01250	0	91.3	85	115			

Sample ID **1802370-001FMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-25**	Batch ID: **C49035**	RunNo: **49035**
Prep Date:	Analysis Date: **2/9/2018**	SeqNo: **1578426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0.0002361	96.8	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586600** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586601** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	107	50	150			
Lead	0.00059	0.00050	0.0005000	0	117	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49190**	RunNo:	**49190**					
Prep Date:		Analysis Date:	**2/16/2018**	SeqNo:	**1586601**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0011	0.0010	0.001000	0	112	50	150			
Uranium	0.00046	0.00050	0.0005000	0	92.6	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49190**	RunNo:	**49190**					
Prep Date:		Analysis Date:	**2/16/2018**	SeqNo:	**1586602**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Selenium	0.023	0.0010	0.02500	0	93.2	85	115			
Uranium	0.012	0.00050	0.01250	0	92.5	85	115			

Sample ID	**1802370-001FMSLL**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-25**	Batch ID:	**C49190**	RunNo:	**49190**					
Prep Date:		Analysis Date:	**2/16/2018**	SeqNo:	**1586620**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.004104	91.8	70	130			
Selenium	0.11	0.0050	0.1250	0	86.9	70	130			
Uranium	0.084	0.0025	0.06250	0.02283	97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36437**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36437**	RunNo:	**49044**					
Prep Date:	**2/8/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1579051**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCSD-36437**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36437**	RunNo:	**49044**					
Prep Date:	**2/8/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1579052**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00078	0.0010	0.001000	0	78.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.2	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.1	50	150			J

Sample ID	**MSLCS-36437**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36437**	RunNo:	**49044**					
Prep Date:	**2/8/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1579053**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.8	85	115			
Lead	0.012	0.00050	0.01250	0	99.9	85	115			
Uranium	0.012	0.00050	0.01250	0	98.1	85	115			

Sample ID	**MB-36437**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36437**	RunNo:	**49104**					
Prep Date:	**2/8/2018**	Analysis Date:	**2/13/2018**	SeqNo:	**1581123**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCSD-36437**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36437**	RunNo:	**49104**					
Prep Date:	**2/8/2018**	Analysis Date:	**2/13/2018**	SeqNo:	**1581124**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00082	0.0010	0.001000	0	82.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**
28-Feb-18

Client: Andeavor Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MSLCS-36437**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **36437**		RunNo: **49104**						
Prep Date:	**2/8/2018**	Analysis Date: **2/13/2018**		SeqNo: **1581125**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	92.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**
28-Feb-18

Client: Andeavor Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36617**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36617**	RunNo:	**49292**					
Prep Date:	**2/20/2018**	Analysis Date:	**2/21/2018**	SeqNo:	**1590649**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000062	0.00020								J

Sample ID	**LCS-36617**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36617**	RunNo:	**49292**					
Prep Date:	**2/20/2018**	Analysis Date:	**2/21/2018**	SeqNo:	**1590650**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49315**	RunNo: **49315**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591545** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.13	0.50								J
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49315**	RunNo: **49315**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Bromide	2.5	0.10	2.500	0	98.6	90	110			
Phosphorus, Orthophosphate (As P	5.2	0.50	5.000	0	104	90	110			
Sulfate	9.9	0.50	10.00	0	98.6	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1593180** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1593181** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.9	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36459**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581212**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-36459**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581213**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS-36423**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36423**	RunNo: **49008**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1577563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	102	92.3	135			
Surr: DNOP	0.53		0.5000		105	77.5	161			

Sample ID **MB-36423**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36423**	RunNo: **49008**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1577564** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	77.5	161			

Sample ID **1802370-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-25**	Batch ID: **36423**	RunNo: **49008**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578252** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.1	1.0	5.000	0.5757	111	83.3	151			
Surr: DNOP	0.53		0.5000		107	77.5	161			

Sample ID **1802370-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-25**	Batch ID: **36423**	RunNo: **49008**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578253** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.2	1.0	5.000	0.5757	113	83.3	151	1.22	20	
Surr: DNOP	0.54		0.5000		109	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**1802370-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-25**	Batch ID:	**R48995**		RunNo:	**48995**				
Prep Date:		Analysis Date:	**2/8/2018**		SeqNo:	**1577204**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	1.0	10.00	16.02	114	52.5	149			
Surr: BFB	560		400.0		139	69.3	150			

Sample ID	**1802370-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-25**	Batch ID:	**R48995**		RunNo:	**48995**				
Prep Date:		Analysis Date:	**2/8/2018**		SeqNo:	**1577205**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	1.0	10.00	16.02	102	52.5	149	4.40	20	
Surr: BFB	550		400.0		138	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.5	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.5	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.3	70	130			
Surr: Toluene-d8	8.6		10.00		86.2	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**
28-Feb-18

Client: Andeavor Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.2	70	130			
Surr: 4-Bromofluorobenzene	7.5		10.00		75.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.2	70	130			
Surr: Toluene-d8	8.7		10.00		86.5	70	130			

Sample ID **1802370-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-25**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579447** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2000	5.0	100.0	1967	83.3	70	130			E
Toluene	110	5.0	100.0	10.49	96.3	70	130			
Chlorobenzene	100	5.0	100.0	0	101	70	130			
1,1-Dichloroethene	210	5.0	100.0	105.6	103	70	130			
Trichloroethene (TCE)	120	5.0	100.0	25.00	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	42		50.00		84.5	70	130			
Surr: 4-Bromofluorobenzene	39		50.00		78.1	70	130			
Surr: Dibromofluoromethane	43		50.00		86.4	70	130			
Surr: Toluene-d8	44		50.00		87.7	70	130			

Sample ID **1802370-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-25**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579448** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	2000	5.0	100.0	1967	46.6	70	130	1.81	20	ES
Toluene	100	5.0	100.0	10.49	93.1	70	130	3.06	20	
Chlorobenzene	96	5.0	100.0	0	95.8	70	130	4.86	20	
1,1-Dichloroethene	210	5.0	100.0	105.6	101	70	130	0.909	20	
Trichloroethene (TCE)	120	5.0	100.0	25.00	91.1	70	130	2.22	20	
Surr: 1,2-Dichloroethane-d4	42		50.00		84.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	40		50.00		79.1	70	130	0	0	
Surr: Dibromofluoromethane	44		50.00		88.3	70	130	0	0	
Surr: Toluene-d8	44		50.00		88.4	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802370-001dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578391** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	54	10	100.0	0	53.5	18.1	108			
4-Chloro-3-methylphenol	120	10	200.0	0	61.7	15	111			
2-Chlorophenol	110	10	200.0	0	53.4	15	113			
1,4-Dichlorobenzene	38	10	100.0	0	38.2	21	81.3			
2,4-Dinitrotoluene	50	10	100.0	0	49.7	27.4	101			
N-Nitrosodi-n-propylamine	56	10	100.0	0	56.2	24.9	107			
4-Nitrophenol	70	10	200.0	0	34.8	15	62.2			
Pentachlorophenol	100	20	200.0	0	50.1	15	96.9			
Phenol	62	10	200.0	6.820	27.5	15	64.7			
Pyrene	63	10	100.0	0	62.5	29.2	111			
1,2,4-Trichlorobenzene	44	10	100.0	0	44.1	22.9	94.8			
Surr: 2-Fluorophenol	73		200.0		36.5	15	114			
Surr: Phenol-d5	58		200.0		28.8	15	97.9			
Surr: 2,4,6-Tribromophenol	120		200.0		59.1	15	161			
Surr: Nitrobenzene-d5	49		100.0		49.3	29.3	120			
Surr: 2-Fluorobiphenyl	48		100.0		48.4	17.5	116			
Surr: 4-Terphenyl-d14	43		100.0		42.5	21	92.2			

Sample ID **1802370-001dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578392** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	75	10	100.0	0	74.9	18.1	108	33.3	30.5	R
4-Chloro-3-methylphenol	170	10	200.0	0	83.2	15	111	29.6	50	
2-Chlorophenol	150	10	200.0	0	76.1	15	113	35.0	36.3	
1,4-Dichlorobenzene	55	10	100.0	0	55.0	21	81.3	36.0	42.1	
2,4-Dinitrotoluene	69	10	100.0	0	68.8	27.4	101	32.3	28.5	R
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.0	24.9	107	38.6	25.4	R
4-Nitrophenol	55	10	200.0	0	27.5	15	62.2	23.4	50	
Pentachlorophenol	130	20	200.0	0	64.4	15	96.9	25.0	50	
Phenol	93	10	200.0	6.820	43.1	15	64.7	40.2	46.1	
Pyrene	80	10	100.0	0	80.4	29.2	111	25.1	34.3	
1,2,4-Trichlorobenzene	62	10	100.0	0	61.5	22.9	94.8	33.0	43.6	
Surr: 2-Fluorophenol	110		200.0		52.7	15	114	0	0	
Surr: Phenol-d5	84		200.0		41.8	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		84.1	15	161	0	0	
Surr: Nitrobenzene-d5	75		100.0		74.8	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	71		100.0		70.5	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802370-001dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578392** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	58		100.0		58.0	21	92.2	0	0	

Sample ID **lcs-36419**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578397** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	71.1	39.7	103			
4-Chloro-3-methylphenol	160	10	200.0	0	80.2	40.5	108			
2-Chlorophenol	140	10	200.0	0	69.6	35	103			
1,4-Dichlorobenzene	46	10	100.0	0	46.0	24.7	93.7			
2,4-Dinitrotoluene	62	10	100.0	0	62.3	35.6	91.4			
N-Nitrosodi-n-propylamine	73	10	100.0	0	73.1	41.6	114			
4-Nitrophenol	72	10	200.0	0	35.9	20.7	74.3			
Pentachlorophenol	100	20	200.0	0	50.9	25.3	98.5			
Phenol	87	10	200.0	0	43.5	20.9	75.1			
Pyrene	76	10	100.0	0	75.9	45.6	108			
1,2,4-Trichlorobenzene	56	10	100.0	0	55.5	30.3	106			
Surr: 2-Fluorophenol	190		400.0		46.4	15	114			
Surr: Phenol-d5	170		400.0		42.5	15	97.9			
Surr: 2,4,6-Tribromophenol	300		400.0		74.9	15	161			
Surr: Nitrobenzene-d5	150		200.0		72.8	29.3	120			
Surr: 2-Fluorobiphenyl	140		200.0		69.9	17.5	116			
Surr: 4-Terphenyl-d14	170		200.0		85.8	21	92.2			

Sample ID **mb-36419**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**
28-Feb-18

Client: Andeavor Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **mb-36419**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	5.8	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802370**

28-Feb-18

Client: Andeavor Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **mb-36419**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36419**	RunNo: **49034**
Prep Date: **2/8/2018**	Analysis Date: **2/9/2018**	SeqNo: **1578398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	48		200.0		23.9	15	114			
Surr: Phenol-d5	63		200.0		31.6	15	97.9			
Surr: 2,4,6-Tribromophenol	83		200.0		41.7	15	161			
Surr: Nitrobenzene-d5	68		100.0		68.4	29.3	120			
Surr: 2-Fluorobiphenyl	62		100.0		62.0	17.5	116			
Surr: 4-Terphenyl-d14	84		100.0		83.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1802370** RcptNo: 1

Received By: **Sophia Campuzano** **2/7/2018 9:45:00 AM** Sophia Campuzano

Completed By: **Ashley Gallegos** **2/7/2018 10:36:53 AM** AG

Reviewed By: JMD 2/7/18 Labeled by: SRE 02107118

Chain of Custody

		Yes	No	Not Present
1.	Is Chain of Custody complete?	☑	☐	☐
2.	How was the sample delivered?	Courier		

Log In

		Yes	No	NA
3.	Was an attempt made to cool the samples?	☑	☐	☐
4.	Were all samples received at a temperature of >0° C to 6.0°C	☑	☐	☐
5.	Sample(s) in proper container(s)?	☑	☐	
6.	Sufficient sample volume for indicated test(s)?	☑	☐	
7.	Are samples (except VOA and ONG) properly preserved?	☑	☐	
8.	Was preservative added to bottles?	☐	☑	☐
9.	VOA vials have zero headspace?	☑	☐	☐ No VOA Vials
10.	Were any sample containers received broken?	☐	☑	
11.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	☑	☐	
12.	Are matrices correctly identified on Chain of Custody?	☑	☐	
13.	Is it clear what analyses were requested?	☑	☐	
14.	Were all holding times able to be met? (If no, notify customer for authorization.)	☑	☐	

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)

Adjusted? no

Checked by: SRE

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: Custody Seals present & intact 02107118 SRE

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			
2	1.9	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.9 2 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802370
2/5/18	1240	WATER	MKTF-25	40 ML VOA-5	HCL	-001
				40 ML VOA-3	$Na_2S_2O_3$	
				1 L AMBER-2	NEAT	
				250 ML AMBER-1	NEAT	
				250 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	
				125 ML PLASTIC-1	NEAT	
	1405	WATER	MKTF-31	40 ML VOA-5	HCL	-002
				40 ML VOA-3	$Na_2S_2O_3$	
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
		✓							✓						
				✓											
										✓					
		✓													
											✓				
											✓	✓			
												✓			
												✓			
		✓							✓						
				✓											
		✓													

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/6/18	0700		courier	02/07/18	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
#1 cooler: 1.6
#2 cooler: 1.9

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.9 2 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802370
2/5/18	1405	WATER	MKTF-31	250 ML PLASTIC-1	HNO_3	-002
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	
				125 ML PLASTIC-1	NEAT	
	1525	WATER	MKTF-40	40 ML VOA-5	HCL	-003
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	
				250 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	
				125 ML PLASTIC-1	NEAT	

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
											✓				
											✓	✓			
												✓			
												✓			
		✓							✓						
										✓					
		✓													
											✓				
											✓	✓			
												✓			
												✓			

Date: 2/6/18 Time: 0700 Relinquished by:
Date: Time: Relinquished by:

Received by: courier Date: 02/07/18 Time: 0945
Received by: Date: Time:

Remarks:
#1 cooler: 1.6
#2 cooler: 1.9

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.O[redacted]@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #: OBRIEN
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.6 & 1.9 2 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802370
2/5/18	—	WATER	DUP01	40 ML VOA-5	HCL	-004
				40 ML VOA-3	$Na_2S_2O_3$	
				1 L AMBER-1	NEAT	
				250 ML AMBER-1	NEAT	
				250 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	
				125 ML PLASTIC-1	NEAT	
↓	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	-005

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
		✓		✓					✓						
				✓											
										✓					
		✓													
											✓				
											✓	✓			
												✓			
												✓			
									✓						

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/6/18	0700		courier		
				02/07/18	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
#1 cooler: 1.6
#2 cooler: 1.9

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 16, 2018

Jessica O'Brien

Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX

RE: 1st Qtr 2018 GW Sampling MKTF OrderNo.: 1802570

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 13 sample(s) on 2/9/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1802570**
Date Reported: **3/16/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0096		µg/L	1	2/12/2018 1:01:39 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 11:45:01 AM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 11:45:01 AM	36464
Surr: DNOP	112	0	77.5-161		%Rec	1	2/13/2018 11:45:01 AM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	1.2	0.22	0.50		mg/L	5	2/22/2018 8:52:18 PM	R49314
Chloride	550	12	25		mg/L	50	2/27/2018 1:25:18 AM	R49384
Bromide	0.95	0.073	0.50		mg/L	5	2/22/2018 8:52:18 PM	R49314
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/22/2018 8:52:18 PM	R49314
Sulfate	390	1.9	10		mg/L	20	2/22/2018 9:04:42 PM	R49314
Nitrate+Nitrite as N	0.31	0.13	1.0	J	mg/L	5	2/23/2018 2:39:44 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.027	0.00099	0.0020		mg/L	1	2/12/2018 3:59:22 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 3:59:22 PM	B49061
Calcium	73	0.078	1.0		mg/L	1	2/12/2018 3:59:22 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 3:59:22 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 3:59:22 PM	B49061
Iron	0.047	0.016	0.020		mg/L	1	2/12/2018 3:59:22 PM	B49061
Magnesium	14	0.25	1.0		mg/L	1	2/12/2018 3:59:22 PM	B49061
Manganese	0.013	0.00039	0.0020		mg/L	1	2/12/2018 3:59:22 PM	B49061
Potassium	0.25	0.11	1.0	J	mg/L	1	2/12/2018 3:59:22 PM	B49061
Silver	ND	0.0018	0.0050		mg/L	1	2/27/2018 5:48:15 PM	A49429
Sodium	730	1.6	10		mg/L	10	2/12/2018 8:55:12 PM	B49061
Zinc	0.0069	0.0021	0.010	J	mg/L	1	2/12/2018 3:59:22 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.087	0.0010	0.0020		mg/L	1	2/16/2018 3:32:03 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:32:03 PM	36554
Chromium	0.0030	0.0018	0.0060	J	mg/L	1	2/16/2018 3:32:03 PM	36554
Copper	0.0051	0.0041	0.0060	J	mg/L	1	2/16/2018 3:32:03 PM	36554
Iron	2.8	0.051	0.10	*	mg/L	5	2/20/2018 8:54:56 PM	36554
Manganese	0.12	0.0011	0.0020	*	mg/L	1	2/16/2018 3:32:03 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:32:03 PM	36554
Zinc	0.011	0.0033	0.010		mg/L	1	2/16/2018 3:32:03 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0035	0.0021	0.0050	J	mg/L	5	2/16/2018 10:23:37 PM	E49190
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 12:07:08 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 6:34:40 PM	B49267
Uranium	0.030	0.00048	0.0025	*	mg/L	5	2/16/2018 10:23:37 PM	E49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	2/21/2018 9:20:05 AM	36554
Lead	0.0025	0.00023	0.00050		mg/L	1	2/19/2018 2:00:13 PM	36554
Selenium	ND	0.0049	0.0050		mg/L	5	2/22/2018 6:30:12 PM	36554
Uranium	0.030	0.00034	0.0025	*	mg/L	5	2/19/2018 2:14:58 PM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000070	0.000037	0.00020	J	mg/L	1	2/23/2018 11:29:47 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzoic acid	ND	3.9	20		µg/L	1	2/28/2018 11:54:33 AM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 11:54:33 AM	36488
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 11:54:33 AM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 11:54:33 AM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 11:54:33 AM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 11:54:33 AM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 11:54:33 AM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 11:54:33 AM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 11:54:33 AM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 11:54:33 AM	36488
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 11:54:33 AM	36488
Surr: 2-Fluorophenol	58.8	0	15-114		%Rec	1	2/28/2018 11:54:33 AM	36488
Surr: Phenol-d5	45.5	0	15-97.9		%Rec	1	2/28/2018 11:54:33 AM	36488
Surr: 2,4,6-Tribromophenol	77.4	0	15-161		%Rec	1	2/28/2018 11:54:33 AM	36488
Surr: Nitrobenzene-d5	77.5	0	29.3-120		%Rec	1	2/28/2018 11:54:33 AM	36488
Surr: 2-Fluorobiphenyl	72.4	0	17.5-116		%Rec	1	2/28/2018 11:54:33 AM	36488
Surr: 4-Terphenyl-d14	60.8	0	21-92.2		%Rec	1	2/28/2018 11:54:33 AM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.22	0.062	1.0	J	µg/L	1	2/12/2018 5:35:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Methyl tert-butyl ether (MTBE)	2.8	0.24	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2-Dichloroethane (EDC)	3.4	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 5:35:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 5:35:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 5:35:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
cis-1,2-DCE	7.6	0.20	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1-Dichloroethane	78	0.40	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1-Dichloroethene	6.2	0.081	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 5:35:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 5:35:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Tetrachloroethene (PCE)	0.27	0.13	1.0	J	µg/L	1	2/12/2018 5:35:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1,1-Trichloroethane	1.4	0.073	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,1,2-Trichloroethane	0.74	0.14	1.0	J	µg/L	1	2/12/2018 5:35:00 PM	R49067
Trichloroethene (TCE)	5.0	0.11	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 5:35:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 5:35:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	84.8	0	70-130		%Rec	1	2/12/2018 5:35:00 PM	R49067
Surr: 4-Bromofluorobenzene	77.0	0	70-130		%Rec	1	2/12/2018 5:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 10:15:00 AM
Lab ID: 1802570-001
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	1	2/12/2018 5:35:00 PM	R49067
Surr: Toluene-d8	86.0	0	70-130		%Rec	1	2/12/2018 5:35:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.10	0.0097	0.050		mg/L	1	2/12/2018 10:19:44 AM	R49065
Surr: BFB	112	0	70-130		%Rec	1	2/12/2018 10:19:44 AM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 1:07:48 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 1:07:48 PM	36464
Surr: DNOP	109	0	77.5-161		%Rec	1	2/13/2018 1:07:48 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	1.0	0.22	0.50		mg/L	5	2/22/2018 9:17:06 PM	R49314
Chloride	380	12	25		mg/L	50	2/27/2018 1:37:43 AM	R49384
Bromide	2.2	0.073	0.50		mg/L	5	2/22/2018 9:17:06 PM	R49314
Phosphorus, Orthophosphate (As P)	1.5	1.2	2.5	JH	mg/L	5	2/22/2018 9:17:06 PM	R49314
Sulfate	180	0.48	2.5		mg/L	5	2/22/2018 9:17:06 PM	R49314
Nitrate+Nitrite as N	2.7	0.13	1.0		mg/L	5	2/23/2018 2:52:08 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.051	0.00099	0.0020		mg/L	1	2/12/2018 4:09:19 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:09:19 PM	B49061
Calcium	44	0.078	1.0		mg/L	1	2/12/2018 4:09:19 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:09:19 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:09:19 PM	B49061
Iron	0.034	0.016	0.020		mg/L	1	2/12/2018 4:09:19 PM	B49061
Magnesium	8.7	0.25	1.0		mg/L	1	2/12/2018 4:09:19 PM	B49061
Manganese	0.0032	0.00039	0.0020		mg/L	1	2/12/2018 4:09:19 PM	B49061
Potassium	1.8	0.11	1.0		mg/L	1	2/12/2018 4:09:19 PM	B49061
Silver	ND	0.0018	0.0050		mg/L	1	2/27/2018 5:50:14 PM	A49429
Sodium	530	1.6	10		mg/L	10	2/12/2018 8:59:16 PM	B49061
Zinc	0.0076	0.0021	0.010	J	mg/L	1	2/12/2018 4:09:19 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.080	0.0010	0.0020		mg/L	1	2/16/2018 3:33:52 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:33:52 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 3:33:52 PM	36554
Copper	0.0049	0.0041	0.0060	J	mg/L	1	2/16/2018 3:33:52 PM	36554
Iron	1.6	0.051	0.10	*	mg/L	5	2/20/2018 8:56:40 PM	36554
Manganese	0.093	0.0011	0.0020	*	mg/L	1	2/16/2018 3:33:52 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:33:52 PM	36554
Zinc	0.015	0.0033	0.010		mg/L	1	2/16/2018 3:33:52 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0042	0.0021	0.0050	J	mg/L	5	2/16/2018 10:28:32 PM	E49190
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 12:12:03 AM	D49096
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 6:44:27 PM	B49267
Uranium	0.13	0.0048	0.025	*	mg/L	50	2/16/2018 10:33:27 PM	E49190

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 9:34:50 AM	36554
Lead	0.0019	0.0011	0.0025	J	mg/L	5	2/19/2018 2:39:34 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:39:19 PM	36554
Uranium	0.15	0.00068	0.0050	*	mg/L	10	2/17/2018 1:41:09 PM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000081	0.000037	0.00020	J	mg/L	1	2/23/2018 11:31:41 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Benzoic acid	6.4	3.9	20	J	µg/L	1	2/28/2018 12:22:26 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 12:22:26 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 12:22:26 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 12:22:26 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 12:22:26 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 12:22:26 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 12:22:26 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 12:22:26 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 12:22:26 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 12:22:26 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 12:22:26 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 12:22:26 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 12:22:26 PM	36488
Surr: 2-Fluorophenol	64.9	0	15-114		%Rec	1	2/28/2018 12:22:26 PM	36488
Surr: Phenol-d5	45.8	0	15-97.9		%Rec	1	2/28/2018 12:22:26 PM	36488
Surr: 2,4,6-Tribromophenol	85.2	0	15-161		%Rec	1	2/28/2018 12:22:26 PM	36488
Surr: Nitrobenzene-d5	89.7	0	29.3-120		%Rec	1	2/28/2018 12:22:26 PM	36488
Surr: 2-Fluorobiphenyl	83.8	0	17.5-116		%Rec	1	2/28/2018 12:22:26 PM	36488
Surr: 4-Terphenyl-d14	54.7	0	21-92.2		%Rec	1	2/28/2018 12:22:26 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Methyl tert-butyl ether (MTBE)	0.74	0.24	1.0	J	µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 5:59:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 5:59:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 5:59:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 5:59:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 5:59:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 5:59:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 5:59:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	85.8	0	70-130		%Rec	1	2/12/2018 5:59:00 PM	R49067
Surr: 4-Bromofluorobenzene	76.4	0	70-130		%Rec	1	2/12/2018 5:59:00 PM	R49067
Surr: Dibromofluoromethane	91.1	0	70-130		%Rec	1	2/12/2018 5:59:00 PM	R49067
Surr: Toluene-d8	85.3	0	70-130		%Rec	1	2/12/2018 5:59:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 11:25:00 AM
Lab ID: 1802570-002
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/12/2018 10:42:46 AM	R49065
Surr: BFB	111	0	70-130		%Rec	1	2/12/2018 10:42:46 AM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 1:35:17 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 1:35:17 PM	36464
Surr: DNOP	105	0	77.5-161		%Rec	1	2/13/2018 1:35:17 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.84	0.22	0.50		mg/L	5	2/22/2018 9:41:55 PM	R49314
Chloride	2300	50	100		mg/L	200	2/27/2018 1:50:07 AM	R49384
Bromide	1.3	0.073	0.50		mg/L	5	2/22/2018 9:41:55 PM	R49314
Phosphorus, Orthophosphate (As P)	2.1	1.2	2.5	JH	mg/L	5	2/22/2018 9:41:55 PM	R49314
Sulfate	200	0.48	2.5		mg/L	5	2/22/2018 9:41:55 PM	R49314
Nitrate+Nitrite as N	1.7	0.26	2.0	J	mg/L	10	2/27/2018 3:41:47 AM	R49384
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.061	0.00099	0.0020		mg/L	1	2/12/2018 4:11:19 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:11:19 PM	B49061
Calcium	180	0.39	5.0		mg/L	5	2/12/2018 9:10:54 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:11:19 PM	B49061
Copper	0.0039	0.0032	0.0060	J	mg/L	1	2/12/2018 4:11:19 PM	B49061
Iron	0.031	0.016	0.020		mg/L	1	2/12/2018 4:11:19 PM	B49061
Magnesium	29	0.25	1.0		mg/L	1	2/12/2018 4:11:19 PM	B49061
Manganese	0.032	0.00039	0.0020		mg/L	1	2/12/2018 4:11:19 PM	B49061
Potassium	8.5	0.11	1.0		mg/L	1	2/12/2018 4:11:19 PM	B49061
Silver	0.0059	0.0018	0.0050		mg/L	1	2/27/2018 5:52:14 PM	A49429
Sodium	1700	8.2	50		mg/L	50	2/12/2018 9:12:55 PM	B49061
Zinc	0.0054	0.0021	0.010	J	mg/L	1	2/12/2018 4:11:19 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.16	0.0010	0.0020		mg/L	1	2/16/2018 3:35:45 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:35:45 PM	36554
Chromium	0.0026	0.0018	0.0060	J	mg/L	1	2/16/2018 3:35:45 PM	36554
Copper	0.0074	0.0041	0.0060		mg/L	1	2/16/2018 3:35:45 PM	36554
Iron	4.1	0.051	0.10	*	mg/L	5	2/20/2018 8:58:34 PM	36554
Manganese	0.52	0.0011	0.0020	*	mg/L	1	2/16/2018 3:35:45 PM	36554
Silver	0.0032	0.0012	0.0050	J	mg/L	1	2/16/2018 3:35:45 PM	36554
Zinc	0.024	0.0033	0.010		mg/L	1	2/16/2018 3:35:45 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.012	0.0084	0.020	J*	mg/L	20	2/16/2018 10:53:10 PM	E49190
Lead	ND	0.0035	0.010		mg/L	20	2/16/2018 10:53:10 PM	E49190
Selenium	ND	0.015	0.020		mg/L	20	2/20/2018 6:49:20 PM	B49267
Uranium	0.033	0.0019	0.010	*	mg/L	20	2/16/2018 10:53:10 PM	E49190

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 9:39:44 AM	36554
Lead	0.0041	0.0011	0.0025		mg/L	5	2/19/2018 2:49:23 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:42:22 PM	36554
Uranium	0.038	0.00034	0.0025	*	mg/L	5	2/21/2018 9:39:44 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000094	0.000037	0.00020	J	mg/L	1	2/23/2018 11:33:36 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Benz(a)anthracene	4.6	3.9	10	J	µg/L	1	2/28/2018 12:50:17 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Benzoic acid	5.8	3.9	20	J	µg/L	1	2/28/2018 12:50:17 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 12:50:17 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 12:50:17 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 12:50:17 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 12:50:17 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 12:50:17 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 12:50:17 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 12:50:17 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 12:50:17 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 12:50:17 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Pyrene	4.6	4.4	10	J	µg/L	1	2/28/2018 12:50:17 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 12:50:17 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 12:50:17 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 12:50:17 PM	36488
Surr: 2-Fluorophenol	49.2	0	15-114		%Rec	1	2/28/2018 12:50:17 PM	36488
Surr: Phenol-d5	36.2	0	15-97.9		%Rec	1	2/28/2018 12:50:17 PM	36488
Surr: 2,4,6-Tribromophenol	60.7	0	15-161		%Rec	1	2/28/2018 12:50:17 PM	36488
Surr: Nitrobenzene-d5	68.9	0	29.3-120		%Rec	1	2/28/2018 12:50:17 PM	36488
Surr: 2-Fluorobiphenyl	64.8	0	17.5-116		%Rec	1	2/28/2018 12:50:17 PM	36488
Surr: 4-Terphenyl-d14	47.4	0	21-92.2		%Rec	1	2/28/2018 12:50:17 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Methyl tert-butyl ether (MTBE)	18	0.24	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2-Dichloroethane (EDC)	0.53	0.40	1.0	J	µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 6:23:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 6:23:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 6:23:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
cis-1,2-DCE	0.21	0.20	1.0	J	µg/L	1	2/12/2018 6:23:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1-Dichloroethane	2.3	0.40	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1-Dichloroethene	0.65	0.081	1.0	J	µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 6:23:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 6:23:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 6:23:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 6:23:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%Rec	1	2/12/2018 6:23:00 PM	R49067
Surr: 4-Bromofluorobenzene	76.2	0	70-130		%Rec	1	2/12/2018 6:23:00 PM	R49067
Surr: Dibromofluoromethane	91.0	0	70-130		%Rec	1	2/12/2018 6:23:00 PM	R49067
Surr: Toluene-d8	85.2	0	70-130		%Rec	1	2/12/2018 6:23:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 12:20:00 PM
Lab ID: 1802570-003
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.014	0.0097	0.050	J	mg/L	1	2/12/2018 11:05:48 AM	R49065
Surr: BFB	114	0	70-130		%Rec	1	2/12/2018 11:05:48 AM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 3:39:23 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 3:39:23 PM	36464
Surr: DNOP	108	0	77.5-161		%Rec	1	2/13/2018 3:39:23 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.81	0.22	0.50		mg/L	5	2/22/2018 10:06:44 PM	R49314
Chloride	160	5.0	10		mg/L	20	2/22/2018 10:19:09 PM	R49314
Bromide	0.83	0.073	0.50		mg/L	5	2/22/2018 10:06:44 PM	R49314
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/22/2018 10:06:44 PM	R49314
Sulfate	560	1.9	10		mg/L	20	2/22/2018 10:19:09 PM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 3:54:11 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.024	0.00099	0.0020		mg/L	1	2/12/2018 4:13:25 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:13:25 PM	B49061
Calcium	70	0.078	1.0		mg/L	1	2/12/2018 4:13:25 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:13:25 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:13:25 PM	B49061
Iron	0.031	0.016	0.020		mg/L	1	2/12/2018 4:13:25 PM	B49061
Magnesium	10	0.25	1.0		mg/L	1	2/12/2018 4:13:25 PM	B49061
Manganese	0.49	0.00039	0.0020	*	mg/L	1	2/12/2018 4:13:25 PM	B49061
Potassium	0.40	0.11	1.0	J	mg/L	1	2/12/2018 4:13:25 PM	B49061
Silver	0.0023	0.0018	0.0050	J	mg/L	1	2/27/2018 5:54:20 PM	A49429
Sodium	470	0.82	5.0		mg/L	5	2/12/2018 9:17:05 PM	B49061
Zinc	0.0063	0.0021	0.010	J	mg/L	1	2/12/2018 4:13:25 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.17	0.0010	0.0020		mg/L	1	2/16/2018 3:37:37 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:37:37 PM	36554
Chromium	0.0052	0.0018	0.0060	J	mg/L	1	2/16/2018 3:37:37 PM	36554
Copper	0.0072	0.0041	0.0060		mg/L	1	2/16/2018 3:37:37 PM	36554
Iron	3.9	0.10	0.20	*	mg/L	10	2/20/2018 9:05:41 PM	36554
Manganese	0.65	0.0011	0.0020	*	mg/L	1	2/16/2018 3:37:37 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:37:37 PM	36554
Zinc	0.014	0.0033	0.010		mg/L	1	2/16/2018 3:37:37 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	2/16/2018 10:58:05 PM	E49190
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 12:21:53 AM	D49096
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 6:59:07 PM	B49267
Uranium	0.0094	0.000096	0.00050		mg/L	1	2/13/2018 12:21:53 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0014	0.00041	0.0010		mg/L	1	2/21/2018 9:44:39 AM	36554
Lead	0.0025	0.00023	0.00050		mg/L	1	2/19/2018 2:59:12 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:45:24 PM	36554
Uranium	0.010	0.000068	0.00050		mg/L	1	2/21/2018 9:44:39 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00010	0.000037	0.00020	J	mg/L	1	2/23/2018 11:35:30 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Benzoic acid	6.2	3.9	20	J	µg/L	1	2/28/2018 1:18:06 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 1:18:06 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 1:18:06 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 1:18:06 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 1:18:06 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 1:18:06 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 1:18:06 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 1:18:06 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 1:18:06 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 1:18:06 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 1:18:06 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 1:18:06 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 1:18:06 PM	36488
Surr: 2-Fluorophenol	66.2	0	15-114		%Rec	1	2/28/2018 1:18:06 PM	36488
Surr: Phenol-d5	45.5	0	15-97.9		%Rec	1	2/28/2018 1:18:06 PM	36488
Surr: 2,4,6-Tribromophenol	85.9	0	15-161		%Rec	1	2/28/2018 1:18:06 PM	36488
Surr: Nitrobenzene-d5	95.7	0	29.3-120		%Rec	1	2/28/2018 1:18:06 PM	36488
Surr: 2-Fluorobiphenyl	89.6	0	17.5-116		%Rec	1	2/28/2018 1:18:06 PM	36488
Surr: 4-Terphenyl-d14	58.2	0	21-92.2		%Rec	1	2/28/2018 1:18:06 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Methyl tert-butyl ether (MTBE)	11	0.24	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 6:47:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 6:47:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 6:47:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 6:47:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 6:47:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 6:47:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 6:47:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	85.5	0	70-130		%Rec	1	2/12/2018 6:47:00 PM	R49067
Surr: 4-Bromofluorobenzene	77.3	0	70-130		%Rec	1	2/12/2018 6:47:00 PM	R49067
Surr: Dibromofluoromethane	90.9	0	70-130		%Rec	1	2/12/2018 6:47:00 PM	R49067
Surr: Toluene-d8	83.5	0	70-130		%Rec	1	2/12/2018 6:47:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-29
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 1:45:00 PM
Lab ID: 1802570-004
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.021	0.0097	0.050	J	mg/L	1	2/12/2018 11:51:07 AM	R49065
Surr: BFB	115	0	70-130		%Rec	1	2/12/2018 11:51:07 AM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	2/12/2018 2:02:19 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.1	0.63	1.0		mg/L	1	2/13/2018 4:07:26 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 4:07:26 PM	36464
Surr: DNOP	108	0	77.5-161		%Rec	1	2/13/2018 4:07:26 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/22/2018 10:56:22 PM	R49314
Chloride	430	12	25		mg/L	50	2/27/2018 2:02:31 AM	R49384
Bromide	1.1	0.073	0.50		mg/L	5	2/22/2018 10:56:22 PM	R49314
Phosphorus, Orthophosphate (As P)	2.4	1.2	2.5	JH	mg/L	5	2/22/2018 10:56:22 PM	R49314
Sulfate	30	0.48	2.5		mg/L	5	2/22/2018 10:56:22 PM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 4:06:35 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.27	0.00099	0.0020		mg/L	1	2/12/2018 4:15:25 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:15:25 PM	B49061
Calcium	120	0.39	5.0		mg/L	5	2/12/2018 9:21:12 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:15:25 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:15:25 PM	B49061
Iron	0.24	0.016	0.020		mg/L	1	2/12/2018 4:15:25 PM	B49061
Magnesium	20	0.25	1.0		mg/L	1	2/12/2018 4:15:25 PM	B49061
Manganese	2.2	0.0020	0.010	*	mg/L	5	2/12/2018 9:21:12 PM	B49061
Potassium	2.0	0.11	1.0		mg/L	1	2/12/2018 4:15:25 PM	B49061
Silver	0.0029	0.0018	0.0050	J	mg/L	1	2/27/2018 5:56:19 PM	A49429
Sodium	490	0.82	5.0		mg/L	5	2/12/2018 9:21:12 PM	B49061
Zinc	0.0096	0.0021	0.010	J	mg/L	1	2/12/2018 4:15:25 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.26	0.0010	0.0020		mg/L	1	2/16/2018 3:39:34 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:39:34 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 3:39:34 PM	36554
Copper	ND	0.0041	0.0060		mg/L	1	2/16/2018 3:39:34 PM	36554
Iron	0.78	0.051	0.10	*	mg/L	5	2/20/2018 9:07:30 PM	36554
Manganese	2.2	0.0055	0.010	*	mg/L	5	2/20/2018 9:07:30 PM	36554
Silver	0.0023	0.0012	0.0050	J	mg/L	1	2/16/2018 3:39:34 PM	36554
Zinc	0.011	0.0033	0.010		mg/L	1	2/16/2018 3:39:34 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0028	0.0021	0.0050	J	mg/L	5	2/16/2018 11:02:59 PM	E49190
Lead	0.0014	0.00017	0.00050		mg/L	1	2/13/2018 12:36:42 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 7:13:52 PM	B49267
Uranium	0.014	0.000096	0.00050		mg/L	1	2/13/2018 12:36:42 AM	D49096
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 10:09:14 AM	36554
Lead	0.0027	0.00023	0.00050		mg/L	1	2/19/2018 3:09:01 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 7:22:02 PM	36554
Uranium	0.016	0.000068	0.00050		mg/L	1	2/21/2018 10:04:20 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000087	0.000037	0.00020	J	mg/L	1	2/23/2018 11:37:25 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzoic acid	ND	3.9	20		µg/L	1	2/28/2018 2:41:30 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 2:41:30 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 2:41:30 PM	36488
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 2:41:30 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 2:41:30 PM	36488
1-Methylnaphthalene	10	3.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 2:41:30 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Naphthalene	7.4	2.9	10	J	µg/L	1	2/28/2018 2:41:30 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 2:41:30 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 2:41:30 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 2:41:30 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Phenol	6.2	3.1	10	J	µg/L	1	2/28/2018 2:41:30 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 2:41:30 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 2:41:30 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 2:41:30 PM	36488
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 2:41:30 PM	36488
Surr: 2-Fluorophenol	55.1	0	15-114		%Rec	1	2/28/2018 2:41:30 PM	36488
Surr: Phenol-d5	40.8	0	15-97.9		%Rec	1	2/28/2018 2:41:30 PM	36488
Surr: 2,4,6-Tribromophenol	78.4	0	15-161		%Rec	1	2/28/2018 2:41:30 PM	36488
Surr: Nitrobenzene-d5	65.7	0	29.3-120		%Rec	1	2/28/2018 2:41:30 PM	36488
Surr: 2-Fluorobiphenyl	68.4	0	17.5-116		%Rec	1	2/28/2018 2:41:30 PM	36488
Surr: 4-Terphenyl-d14	50.9	0	21-92.2		%Rec	1	2/28/2018 2:41:30 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	6300	12	200		µg/L	200	2/12/2018 7:11:00 PM	R49067
Toluene	30	1.3	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Ethylbenzene	410	1.9	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Methyl tert-butyl ether (MTBE)	170	4.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2,4-Trimethylbenzene	2.4	2.3	20	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
1,3,5-Trimethylbenzene	4.2	1.7	20	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Naphthalene	12	2.3	40	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
1-Methylnaphthalene	17	3.2	80	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
2-Methylnaphthalene	ND	3.0	80		µg/L	20	2/12/2018 7:35:00 PM	R49067
Acetone	ND	16	200		µg/L	20	2/12/2018 7:35:00 PM	R49067
Bromobenzene	ND	2.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Bromodichloromethane	ND	3.5	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Bromoform	ND	4.2	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Bromomethane	ND	5.1	60		µg/L	20	2/12/2018 7:35:00 PM	R49067
2-Butanone	ND	23	200		µg/L	20	2/12/2018 7:35:00 PM	R49067
Carbon disulfide	ND	8.0	200		µg/L	20	2/12/2018 7:35:00 PM	R49067
Carbon Tetrachloride	ND	2.2	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Chlorobenzene	ND	2.1	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Chloroethane	5.6	4.7	40	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
Chloroform	ND	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Chloromethane	ND	5.9	60		µg/L	20	2/12/2018 7:35:00 PM	R49067
2-Chlorotoluene	ND	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
4-Chlorotoluene	ND	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
cis-1,2-DCE	17	4.1	20	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	2/12/2018 7:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	1.4	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Dibromomethane	ND	1.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Dichlorodifluoromethane	ND	20	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1-Dichloroethane	82	8.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1-Dichloroethene	27	1.6	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2-Dichloropropane	ND	2.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,3-Dichloropropane	ND	3.3	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
2,2-Dichloropropane	ND	3.1	40		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1-Dichloropropene	ND	1.9	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Hexachlorobutadiene	ND	16	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
2-Hexanone	ND	13	200		µg/L	20	2/12/2018 7:35:00 PM	R49067
Isopropylbenzene	43	1.0	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
4-Isopropyltoluene	4.1	1.9	20	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
4-Methyl-2-pentanone	ND	14	200		µg/L	20	2/12/2018 7:35:00 PM	R49067
Methylene Chloride	ND	2.2	60		µg/L	20	2/12/2018 7:35:00 PM	R49067
n-Butylbenzene	19	2.6	60	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
n-Propylbenzene	95	1.5	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
sec-Butylbenzene	11	2.2	20	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
Styrene	ND	3.1	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
tert-Butylbenzene	ND	2.1	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	2/12/2018 7:35:00 PM	R49067
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
trans-1,2-DCE	ND	3.7	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Trichlorofluoromethane	ND	3.7	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	2/12/2018 7:35:00 PM	R49067
Vinyl chloride	37	3.6	20		µg/L	20	2/12/2018 7:35:00 PM	R49067
Xylenes, Total	15	6.4	30	J	µg/L	20	2/12/2018 7:35:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	82.6	0	70-130		%Rec	20	2/12/2018 7:35:00 PM	R49067
Surr: 4-Bromofluorobenzene	78.7	0	70-130		%Rec	20	2/12/2018 7:35:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 2:45:00 PM
Lab ID: 1802570-005
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	87.1	0	70-130		%Rec	20	2/12/2018 7:35:00 PM	R49067
Surr: Toluene-d8	87.1	0	70-130		%Rec	20	2/12/2018 7:35:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	21	0.48	2.5		mg/L	50	2/12/2018 12:14:03 PM	R49065
Surr: BFB	113	0	70-130		%Rec	50	2/12/2018 12:14:03 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.015	0.0049	0.0095		µg/L	1	2/12/2018 2:17:43 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.8	0.63	1.0		mg/L	1	2/13/2018 4:35:27 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 4:35:27 PM	36464
Surr: DNOP	109	0	77.5-161		%Rec	1	2/13/2018 4:35:27 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	2.3	0.22	0.50		mg/L	5	2/22/2018 11:21:11 PM	R49314
Chloride	520	12	25		mg/L	50	2/27/2018 2:14:56 AM	R49384
Bromide	1.0	0.073	0.50		mg/L	5	2/22/2018 11:21:11 PM	R49314
Phosphorus, Orthophosphate (As P)	2.5	1.2	2.5	JH	mg/L	5	2/22/2018 11:21:11 PM	R49314
Sulfate	20	0.48	2.5		mg/L	5	2/22/2018 11:21:11 PM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 4:19:00 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.28	0.00099	0.0020		mg/L	1	2/12/2018 4:17:30 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:17:30 PM	B49061
Calcium	76	0.078	1.0		mg/L	1	2/12/2018 4:17:30 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:17:30 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:17:30 PM	B49061
Iron	0.022	0.016	0.020		mg/L	1	2/12/2018 4:17:30 PM	B49061
Magnesium	13	0.25	1.0		mg/L	1	2/12/2018 4:17:30 PM	B49061
Manganese	0.55	0.00039	0.0020	*	mg/L	1	2/12/2018 4:17:30 PM	B49061
Potassium	2.2	0.11	1.0		mg/L	1	2/12/2018 4:17:30 PM	B49061
Silver	0.0025	0.0018	0.0050	J	mg/L	1	2/27/2018 5:58:21 PM	A49429
Sodium	620	1.6	10		mg/L	10	2/12/2018 9:27:32 PM	B49061
Zinc	0.0070	0.0021	0.010	J	mg/L	1	2/12/2018 4:17:30 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.28	0.0010	0.0020		mg/L	1	2/16/2018 3:49:00 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:49:00 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 3:49:00 PM	36554
Copper	ND	0.0041	0.0060		mg/L	1	2/16/2018 3:49:00 PM	36554
Iron	0.57	0.010	0.020	*	mg/L	1	2/16/2018 3:49:00 PM	36554
Manganese	0.61	0.0011	0.0020	*	mg/L	1	2/16/2018 3:49:00 PM	36554
Silver	0.0016	0.0012	0.0050	J	mg/L	1	2/16/2018 3:49:00 PM	36554
Zinc	ND	0.0033	0.010		mg/L	1	2/16/2018 3:49:00 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0037	0.0021	0.0050	J	mg/L	5	2/16/2018 11:07:53 PM	E49190
Lead	0.00052	0.00017	0.00050		mg/L	1	2/13/2018 12:41:36 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 7:18:45 PM	B49267
Uranium	0.030	0.00048	0.0025	*	mg/L	5	2/16/2018 11:07:53 PM	E49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 10:19:04 AM	36554
Lead	0.00090	0.00023	0.00050		mg/L	1	2/19/2018 3:18:50 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:54:35 PM	36554
Uranium	0.032	0.00034	0.0025	*	mg/L	5	2/21/2018 10:19:04 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000075	0.000037	0.00020	J	mg/L	1	2/23/2018 11:43:24 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzoic acid	ND	3.9	20		µg/L	1	2/28/2018 3:09:22 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 3:09:22 PM	36488
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4-Dimethylphenol	8.0	2.8	10	J	µg/L	1	2/28/2018 3:09:22 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 3:09:22 PM	36488
1-Methylnaphthalene	31	3.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Methylphenol	3.8	3.3	10	J	µg/L	1	2/28/2018 3:09:22 PM	36488
3+4-Methylphenol	12	3.2	10		µg/L	1	2/28/2018 3:09:22 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Naphthalene	20	2.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 3:09:22 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 3:09:22 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 3:09:22 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Phenol	16	3.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 3:09:22 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 3:09:22 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 3:09:22 PM	36488
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 3:09:22 PM	36488
Surr: 2-Fluorophenol	62.0	0	15-114		%Rec	1	2/28/2018 3:09:22 PM	36488
Surr: Phenol-d5	44.5	0	15-97.9		%Rec	1	2/28/2018 3:09:22 PM	36488
Surr: 2,4,6-Tribromophenol	85.5	0	15-161		%Rec	1	2/28/2018 3:09:22 PM	36488
Surr: Nitrobenzene-d5	76.2	0	29.3-120		%Rec	1	2/28/2018 3:09:22 PM	36488
Surr: 2-Fluorobiphenyl	80.5	0	17.5-116		%Rec	1	2/28/2018 3:09:22 PM	36488
Surr: 4-Terphenyl-d14	66.7	0	21-92.2		%Rec	1	2/28/2018 3:09:22 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2600	3.1	50		µg/L	50	2/12/2018 7:59:00 PM	R49067
Toluene	49	0.32	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Ethylbenzene	250	0.47	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Methyl tert-butyl ether (MTBE)	110	1.2	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2,4-Trimethylbenzene	180	0.56	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,3,5-Trimethylbenzene	5.0	0.44	5.0	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Naphthalene	22	0.57	10		µg/L	5	2/12/2018 8:23:00 PM	R49067
1-Methylnaphthalene	20	0.80	20		µg/L	5	2/12/2018 8:23:00 PM	R49067
2-Methylnaphthalene	2.8	0.76	20	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
Acetone	ND	4.1	50		µg/L	5	2/12/2018 8:23:00 PM	R49067
Bromobenzene	ND	0.70	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Bromodichloromethane	ND	0.88	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Bromoform	ND	1.1	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Bromomethane	ND	1.3	15		µg/L	5	2/12/2018 8:23:00 PM	R49067
2-Butanone	ND	5.7	50		µg/L	5	2/12/2018 8:23:00 PM	R49067
Carbon disulfide	ND	2.0	50		µg/L	5	2/12/2018 8:23:00 PM	R49067
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Chlorobenzene	ND	0.53	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Chloroethane	ND	1.2	10		µg/L	5	2/12/2018 8:23:00 PM	R49067
Chloroform	ND	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Chloromethane	ND	1.5	15		µg/L	5	2/12/2018 8:23:00 PM	R49067
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
cis-1,2-DCE	14	1.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	2/12/2018 8:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006 **Matrix:** AQUEOUS **Received Date:** 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.36	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Dibromomethane	ND	0.45	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1-Dichloroethane	41	2.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1-Dichloroethene	18	0.40	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
2,2-Dichloropropane	ND	0.79	10		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
2-Hexanone	ND	3.3	50		µg/L	5	2/12/2018 8:23:00 PM	R49067
Isopropylbenzene	14	0.26	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
4-Isopropyltoluene	1.4	0.48	5.0	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	2/12/2018 8:23:00 PM	R49067
Methylene Chloride	ND	0.54	15		µg/L	5	2/12/2018 8:23:00 PM	R49067
n-Butylbenzene	3.8	0.65	15	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
n-Propylbenzene	38	0.37	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
sec-Butylbenzene	2.2	0.55	5.0	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
Styrene	ND	0.78	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	2/12/2018 8:23:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
Trichloroethene (TCE)	3.0	0.56	5.0	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	2/12/2018 8:23:00 PM	R49067
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	2/12/2018 8:23:00 PM	R49067
Vinyl chloride	3.7	0.89	5.0	J	µg/L	5	2/12/2018 8:23:00 PM	R49067
Xylenes, Total	89	1.6	7.5		µg/L	5	2/12/2018 8:23:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	85.2	0	70-130		%Rec	5	2/12/2018 8:23:00 PM	R49067
Surr: 4-Bromofluorobenzene	78.5	0	70-130		%Rec	5	2/12/2018 8:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018 3:20:00 PM
Lab ID: 1802570-006
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	89.2	0	70-130		%Rec	5	2/12/2018 8:23:00 PM	R49067
Surr: Toluene-d8	86.0	0	70-130		%Rec	5	2/12/2018 8:23:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	7.7	0.097	0.50		mg/L	10	2/12/2018 12:37:06 PM	R49065
Surr: BFB	95.2	0	70-130		%Rec	10	2/12/2018 12:37:06 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 5:03:15 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 5:03:15 PM	36464
Surr: DNOP	112	0	77.5-161		%Rec	1	2/13/2018 5:03:15 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.76	0.22	0.50		mg/L	5	2/22/2018 11:46:00 PM	R49314
Chloride	150	5.0	10		mg/L	20	2/22/2018 11:58:25 PM	R49314
Bromide	0.82	0.073	0.50		mg/L	5	2/22/2018 11:46:00 PM	R49314
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/22/2018 11:46:00 PM	R49314
Sulfate	540	1.9	10		mg/L	20	2/22/2018 11:58:25 PM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 4:31:24 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.023	0.00099	0.0020		mg/L	1	2/12/2018 4:19:37 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:19:37 PM	B49061
Calcium	71	0.078	1.0		mg/L	1	2/12/2018 4:19:37 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:19:37 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:19:37 PM	B49061
Iron	0.027	0.016	0.020		mg/L	1	2/12/2018 4:19:37 PM	B49061
Magnesium	10	0.25	1.0		mg/L	1	2/12/2018 4:19:37 PM	B49061
Manganese	0.49	0.00039	0.0020	*	mg/L	1	2/12/2018 4:19:37 PM	B49061
Potassium	0.28	0.11	1.0	J	mg/L	1	2/12/2018 4:19:37 PM	B49061
Silver	0.0025	0.0018	0.0050	J	mg/L	1	2/27/2018 6:00:22 PM	A49429
Sodium	470	1.6	10		mg/L	10	2/12/2018 9:39:13 PM	B49061
Zinc	0.0084	0.0021	0.010	J	mg/L	1	2/12/2018 4:19:37 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	2/16/2018 3:50:53 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:50:53 PM	36554
Chromium	0.0030	0.0018	0.0060	J	mg/L	1	2/16/2018 3:50:53 PM	36554
Copper	0.0065	0.0041	0.0060		mg/L	1	2/16/2018 3:50:53 PM	36554
Iron	2.8	0.051	0.10	*	mg/L	5	2/20/2018 9:09:24 PM	36554
Manganese	0.59	0.0011	0.0020	*	mg/L	1	2/16/2018 3:50:53 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:50:53 PM	36554
Zinc	0.011	0.0033	0.010		mg/L	1	2/16/2018 3:50:53 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0028	0.0021	0.0050	J	mg/L	5	2/16/2018 11:12:48 PM	E49190
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 12:46:31 AM	D49096
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 7:23:38 PM	B49267
Uranium	0.0094	0.000096	0.00050		mg/L	1	2/13/2018 12:46:31 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 10:28:54 AM	36554
Lead	0.0020	0.00023	0.00050		mg/L	1	2/19/2018 3:38:32 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 6:57:38 PM	36554
Uranium	0.010	0.000068	0.00050		mg/L	1	2/21/2018 10:23:59 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000082	0.000037	0.00020	J	mg/L	1	2/23/2018 11:45:20 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Benzoic acid	6.4	3.9	20	J	µg/L	1	2/28/2018 3:37:11 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 3:37:11 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 3:37:11 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 3:37:11 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 3:37:11 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 3:37:11 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 3:37:11 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 3:37:11 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 3:37:11 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 3:37:11 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 3:37:11 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 3:37:11 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 3:37:11 PM	36488
Surr: 2-Fluorophenol	52.8	0	15-114		%Rec	1	2/28/2018 3:37:11 PM	36488
Surr: Phenol-d5	37.5	0	15-97.9		%Rec	1	2/28/2018 3:37:11 PM	36488
Surr: 2,4,6-Tribromophenol	78.9	0	15-161		%Rec	1	2/28/2018 3:37:11 PM	36488
Surr: Nitrobenzene-d5	79.3	0	29.3-120		%Rec	1	2/28/2018 3:37:11 PM	36488
Surr: 2-Fluorobiphenyl	72.5	0	17.5-116		%Rec	1	2/28/2018 3:37:11 PM	36488
Surr: 4-Terphenyl-d14	54.8	0	21-92.2		%Rec	1	2/28/2018 3:37:11 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.45	0.062	1.0	J	µg/L	1	2/12/2018 8:47:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Methyl tert-butyl ether (MTBE)	11	0.24	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2,4-Trimethylbenzene	0.13	0.11	1.0	J	µg/L	1	2/12/2018 8:47:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1-Methylnaphthalene	0.47	0.16	4.0	J	µg/L	1	2/12/2018 8:47:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 8:47:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 8:47:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 8:47:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 8:47:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 8:47:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 8:47:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 8:47:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	87.0	0	70-130		%Rec	1	2/12/2018 8:47:00 PM	R49067
Surr: 4-Bromofluorobenzene	76.1	0	70-130		%Rec	1	2/12/2018 8:47:00 PM	R49067
Surr: Dibromofluoromethane	90.0	0	70-130		%Rec	1	2/12/2018 8:47:00 PM	R49067
Surr: Toluene-d8	84.7	0	70-130		%Rec	1	2/12/2018 8:47:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP02
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/6/2018
Lab ID: 1802570-007
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.013	0.0097	0.050	J	mg/L	1	2/12/2018 12:59:58 PM	R49065
Surr: BFB	114	0	70-130		%Rec	1	2/12/2018 12:59:58 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 5:31:11 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 5:31:11 PM	36464
Surr: DNOP	107	0	77.5-161		%Rec	1	2/13/2018 5:31:11 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/28/2018 4:06:38 PM	R49479
Chloride	8500	250	500		mg/L	1000	2/28/2018 4:19:02 PM	R49479
Bromide	4.9	0.073	0.50		mg/L	5	2/28/2018 4:06:38 PM	R49479
Phosphorus, Orthophosphate (As P)	3.8	1.2	2.5		mg/L	5	2/28/2018 4:06:38 PM	R49479
Sulfate	950	96	500		mg/L	1000	2/28/2018 4:19:02 PM	R49479
Nitrate+Nitrite as N	13	1.3	10	*	mg/L	50	3/1/2018 8:19:06 PM	R49508
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.075	0.0049	0.010		mg/L	5	2/13/2018 8:46:22 PM	A49102
Cadmium	ND	0.0050	0.010		mg/L	5	2/12/2018 9:41:18 PM	B49061
Calcium	2000	3.9	50		mg/L	50	2/12/2018 9:43:36 PM	B49061
Chromium	ND	0.0064	0.030		mg/L	5	2/12/2018 9:41:18 PM	B49061
Copper	ND	0.016	0.030		mg/L	5	2/12/2018 9:41:18 PM	B49061
Iron	ND	0.082	0.10		mg/L	5	2/12/2018 9:41:18 PM	B49061
Magnesium	310	1.2	5.0		mg/L	5	2/12/2018 9:41:18 PM	B49061
Manganese	5.5	0.020	0.10	*	mg/L	50	2/12/2018 9:43:36 PM	B49061
Potassium	7.1	0.56	5.0		mg/L	5	2/12/2018 9:41:18 PM	B49061
Silver	0.0096	0.0018	0.0050		mg/L	1	2/14/2018 5:16:54 PM	A49128
Sodium	4700	8.2	50		mg/L	50	2/12/2018 9:43:36 PM	B49061
Zinc	ND	0.011	0.050		mg/L	5	2/12/2018 9:41:18 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.17	0.0010	0.0020		mg/L	1	2/16/2018 3:52:45 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:52:45 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 3:52:45 PM	36554
Copper	0.012	0.0041	0.0060		mg/L	1	2/16/2018 3:52:45 PM	36554
Iron	4.7	0.10	0.20	*	mg/L	10	2/20/2018 9:11:08 PM	36554
Manganese	4.9	0.011	0.020	*	mg/L	10	2/20/2018 9:11:08 PM	36554
Silver	0.029	0.0012	0.0050		mg/L	1	2/16/2018 3:52:45 PM	36554
Zinc	0.018	0.0033	0.010		mg/L	1	2/16/2018 3:52:45 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.013	0.0084	0.020	J*	mg/L	20	2/19/2018 10:35:56 PM	B49231
Lead	ND	0.0017	0.0050		mg/L	10	2/19/2018 10:40:50 PM	B49231
Selenium	ND	0.038	0.050		mg/L	50	2/21/2018 8:15:57 PM	B49298
Uranium	0.14	0.00096	0.0050	*	mg/L	10	2/19/2018 10:40:50 PM	B49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0058	0.0041	0.010	J	mg/L	10	2/17/2018 2:09:29 PM	36554
Lead	0.0050	0.0023	0.0050		mg/L	10	2/17/2018 2:09:29 PM	36554
Selenium	0.023	0.020	0.020		mg/L	20	2/22/2018 7:00:41 PM	36554
Uranium	0.14	0.00068	0.0050	*	mg/L	10	2/17/2018 2:09:29 PM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000091	0.000037	0.00020	J	mg/L	1	2/23/2018 11:47:17 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Benz(a)anthracene	4.1	3.9	10	J	µg/L	1	2/28/2018 4:05:03 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Benzoic acid	7.2	3.9	20	J	µg/L	1	2/28/2018 4:05:03 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 4:05:03 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 4:05:03 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 4:05:03 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 4:05:03 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 4:05:03 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 4:05:03 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 4:05:03 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 4:05:03 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 4:05:03 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 4:05:03 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 4:05:03 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 4:05:03 PM	36488
Surr: 2-Fluorophenol	2.21	0	15-114	S	%Rec	1	2/28/2018 4:05:03 PM	36488
Surr: Phenol-d5	3.29	0	15-97.9	S	%Rec	1	2/28/2018 4:05:03 PM	36488
Surr: 2,4,6-Tribromophenol	0.490	0	15-161	S	%Rec	1	2/28/2018 4:05:03 PM	36488
Surr: Nitrobenzene-d5	63.7	0	29.3-120		%Rec	1	2/28/2018 4:05:03 PM	36488
Surr: 2-Fluorobiphenyl	62.9	0	17.5-116		%Rec	1	2/28/2018 4:05:03 PM	36488
Surr: 4-Terphenyl-d14	51.4	0	21-92.2		%Rec	1	2/28/2018 4:05:03 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.18	0.062	1.0	J	µg/L	1	2/12/2018 9:11:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 9:11:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 9:11:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 9:11:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 9:11:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 9:11:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 9:11:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 9:11:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	2/12/2018 9:11:00 PM	R49067
Surr: 4-Bromofluorobenzene	77.3	0	70-130		%Rec	1	2/12/2018 9:11:00 PM	R49067
Surr: Dibromofluoromethane	91.6	0	70-130		%Rec	1	2/12/2018 9:11:00 PM	R49067
Surr: Toluene-d8	85.8	0	70-130		%Rec	1	2/12/2018 9:11:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 9:10:00 AM
Lab ID: 1802570-008
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/12/2018 1:23:00 PM	R49065
Surr: BFB	112	0	70-130		%Rec	1	2/12/2018 1:23:00 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	2/12/2018 2:32:49 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 5:59:05 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 5:59:05 PM	36464
Surr: DNOP	109	0	77.5-161		%Rec	1	2/13/2018 5:59:05 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/23/2018 12:10:49 AM	R49314
Chloride	420	12	25		mg/L	50	2/27/2018 2:27:20 AM	R49384
Bromide	1.2	0.073	0.50		mg/L	5	2/23/2018 12:10:49 AM	R49314
Phosphorus, Orthophosphate (As P)	1.7	1.2	2.5	JH	mg/L	5	2/23/2018 12:10:49 AM	R49314
Sulfate	93	0.48	2.5		mg/L	5	2/23/2018 12:10:49 AM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 4:43:48 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.052	0.00099	0.0020		mg/L	1	2/12/2018 4:23:51 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:23:51 PM	B49061
Calcium	29	0.078	1.0		mg/L	1	2/12/2018 4:23:51 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:23:51 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:23:51 PM	B49061
Iron	0.031	0.016	0.020		mg/L	1	2/12/2018 4:23:51 PM	B49061
Magnesium	5.6	0.25	1.0		mg/L	1	2/12/2018 4:23:51 PM	B49061
Manganese	0.062	0.00039	0.0020	*	mg/L	1	2/12/2018 4:23:51 PM	B49061
Potassium	0.61	0.11	1.0	J	mg/L	1	2/12/2018 4:23:51 PM	B49061
Silver	ND	0.0018	0.0050		mg/L	1	2/12/2018 4:23:51 PM	B49061
Sodium	540	1.6	10		mg/L	10	2/12/2018 9:47:51 PM	B49061
Zinc	0.0068	0.0021	0.010	J	mg/L	1	2/12/2018 4:23:51 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.10	0.0010	0.0020		mg/L	1	2/16/2018 3:54:40 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:54:40 PM	36554
Chromium	0.0031	0.0018	0.0060	J	mg/L	1	2/16/2018 3:54:40 PM	36554
Copper	0.0064	0.0041	0.0060		mg/L	1	2/16/2018 3:54:40 PM	36554
Iron	2.1	0.051	0.10	*	mg/L	5	2/20/2018 9:13:09 PM	36554
Manganese	0.11	0.0011	0.0020	*	mg/L	1	2/16/2018 3:54:40 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:54:40 PM	36554
Zinc	0.013	0.0033	0.010		mg/L	1	2/16/2018 3:54:40 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/19/2018 10:45:44 PM	B49231
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 12:56:19 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 7:38:17 PM	B49267
Uranium	0.060	0.00048	0.0025	*	mg/L	5	2/19/2018 10:45:44 PM	B49231
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 10:38:44 AM	36554
Lead	0.0019	0.0011	0.0025	J	mg/L	5	2/19/2018 3:58:12 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 7:03:44 PM	36554
Uranium	0.060	0.00034	0.0025	*	mg/L	5	2/21/2018 10:38:44 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000096	0.000037	0.00020	J	mg/L	1	2/23/2018 11:49:14 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Benzoic acid	8.5	3.9	20	J	µg/L	1	2/28/2018 4:32:55 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 4:32:55 PM	36488
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 4:32:55 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 4:32:55 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 4:32:55 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 4:32:55 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 4:32:55 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 4:32:55 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 4:32:55 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 4:32:55 PM	36488
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 4:32:55 PM	36488
Surr: 2-Fluorophenol	61.0	0	15-114		%Rec	1	2/28/2018 4:32:55 PM	36488
Surr: Phenol-d5	43.7	0	15-97.9		%Rec	1	2/28/2018 4:32:55 PM	36488
Surr: 2,4,6-Tribromophenol	83.9	0	15-161		%Rec	1	2/28/2018 4:32:55 PM	36488
Surr: Nitrobenzene-d5	84.9	0	29.3-120		%Rec	1	2/28/2018 4:32:55 PM	36488
Surr: 2-Fluorobiphenyl	83.4	0	17.5-116		%Rec	1	2/28/2018 4:32:55 PM	36488
Surr: 4-Terphenyl-d14	62.8	0	21-92.2		%Rec	1	2/28/2018 4:32:55 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.49	0.062	1.0	J	µg/L	1	2/12/2018 9:59:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Methyl tert-butyl ether (MTBE)	740	2.4	10		µg/L	10	2/12/2018 9:35:00 PM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2-Dichloroethane (EDC)	19	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 9:59:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 9:59:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 9:59:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
cis-1,2-DCE	2.0	0.20	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1-Dichloroethane	17	0.40	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1-Dichloroethene	34	0.081	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 9:59:00 PM	R49067
Isopropylbenzene	0.13	0.051	1.0	J	µg/L	1	2/12/2018 9:59:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 9:59:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
sec-Butylbenzene	0.68	0.11	1.0	J	µg/L	1	2/12/2018 9:59:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1,1-Trichloroethane	0.51	0.073	1.0	J	µg/L	1	2/12/2018 9:59:00 PM	R49067
1,1,2-Trichloroethane	1.5	0.14	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Trichloroethene (TCE)	0.36	0.11	1.0	J	µg/L	1	2/12/2018 9:59:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 9:59:00 PM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/12/2018 9:59:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	84.8	0	70-130		%Rec	1	2/12/2018 9:59:00 PM	R49067
Surr: 4-Bromofluorobenzene	76.5	0	70-130		%Rec	1	2/12/2018 9:59:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 11:05:00 AM
Lab ID: 1802570-009
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	89.8	0	70-130		%Rec	1	2/12/2018 9:59:00 PM	R49067
Surr: Toluene-d8	86.3	0	70-130		%Rec	1	2/12/2018 9:59:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.65	0.0097	0.050		mg/L	1	2/12/2018 1:45:53 PM	R49065
Surr: BFB	116	0	70-130		%Rec	1	2/12/2018 1:45:53 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	2/12/2018 2:47:58 PM	36459
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 6:26:45 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 6:26:45 PM	36464
Surr: DNOP	111	0	77.5-161		%Rec	1	2/13/2018 6:26:45 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.27	0.22	0.50	J	mg/L	5	2/23/2018 1:25:18 AM	R49314
Chloride	790	12	25		mg/L	50	2/27/2018 2:39:45 AM	R49384
Bromide	2.1	0.073	0.50		mg/L	5	2/23/2018 1:25:18 AM	R49314
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/23/2018 1:25:18 AM	R49314
Sulfate	61	0.48	2.5		mg/L	5	2/23/2018 1:25:18 AM	R49314
Nitrate+Nitrite as N	5.3	0.13	1.0		mg/L	5	2/23/2018 4:56:13 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.057	0.00099	0.0020		mg/L	1	2/12/2018 4:25:52 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:25:52 PM	B49061
Calcium	14	0.078	1.0		mg/L	1	2/12/2018 4:25:52 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:25:52 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:25:52 PM	B49061
Iron	0.017	0.016	0.020	J	mg/L	1	2/12/2018 4:25:52 PM	B49061
Magnesium	1.7	0.25	1.0		mg/L	1	2/12/2018 4:25:52 PM	B49061
Manganese	0.0016	0.00039	0.0020	J	mg/L	1	2/12/2018 4:25:52 PM	B49061
Potassium	1.6	0.11	1.0		mg/L	1	2/12/2018 4:25:52 PM	B49061
Silver	ND	0.0018	0.0050		mg/L	1	2/12/2018 4:25:52 PM	B49061
Sodium	610	1.6	10		mg/L	10	2/12/2018 9:51:45 PM	B49061
Zinc	0.0075	0.0021	0.010	J	mg/L	1	2/12/2018 4:25:52 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	2/16/2018 3:56:31 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:56:31 PM	36554
Chromium	0.0021	0.0018	0.0060	J	mg/L	1	2/16/2018 3:56:31 PM	36554
Copper	ND	0.0041	0.0060		mg/L	1	2/16/2018 3:56:31 PM	36554
Iron	2.4	0.051	0.10	*	mg/L	5	2/20/2018 9:14:59 PM	36554
Manganese	0.084	0.0011	0.0020	*	mg/L	1	2/16/2018 3:56:31 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:56:31 PM	36554
Zinc	0.012	0.0033	0.010		mg/L	1	2/16/2018 3:56:31 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0084	0.020		mg/L	20	2/19/2018 11:15:16 PM	C49231
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 1:01:13 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	0.038	0.0038	0.0050		mg/L	5	2/20/2018 8:12:35 PM	C49267
Uranium	0.015	0.000096	0.00050		mg/L	1	2/13/2018 1:01:13 AM	D49096
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0056	0.0041	0.010	J	mg/L	10	2/17/2018 2:18:56 PM	36554
Lead	0.0026	0.0011	0.0025		mg/L	5	2/19/2018 4:08:01 PM	36554
Selenium	0.038	0.0049	0.0050		mg/L	5	2/22/2018 7:06:47 PM	36554
Uranium	0.016	0.00034	0.0025		mg/L	5	2/21/2018 10:43:39 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000085	0.000037	0.00020	J	mg/L	1	2/23/2018 11:51:12 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Benzoic acid	9.5	3.9	20	J	µg/L	1	2/28/2018 5:00:48 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 5:00:48 PM	36488
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 5:00:48 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 5:00:48 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 5:00:48 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 5:00:48 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 5:00:48 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 5:00:48 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 5:00:48 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 5:00:48 PM	36488
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 5:00:48 PM	36488
Surr: 2-Fluorophenol	58.3	0	15-114		%Rec	1	2/28/2018 5:00:48 PM	36488
Surr: Phenol-d5	43.1	0	15-97.9		%Rec	1	2/28/2018 5:00:48 PM	36488
Surr: 2,4,6-Tribromophenol	73.4	0	15-161		%Rec	1	2/28/2018 5:00:48 PM	36488
Surr: Nitrobenzene-d5	80.2	0	29.3-120		%Rec	1	2/28/2018 5:00:48 PM	36488
Surr: 2-Fluorobiphenyl	70.3	0	17.5-116		%Rec	1	2/28/2018 5:00:48 PM	36488
Surr: 4-Terphenyl-d14	55.2	0	21-92.2		%Rec	1	2/28/2018 5:00:48 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Methyl tert-butyl ether (MTBE)	1.4	0.24	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2,4-Trimethylbenzene	0.12	0.11	1.0	J	µg/L	1	2/12/2018 10:23:00 PM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2-Dichloroethane (EDC)	3.4	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Acetone	ND	0.82	10		µg/L	1	2/12/2018 10:23:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/12/2018 10:23:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 10:23:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1-Dichloroethane	4.1	0.40	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1-Dichloroethene	6.0	0.081	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 10:23:00 PM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/12/2018 10:23:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,1,2-Trichloroethane	0.71	0.14	1.0	J	µg/L	1	2/12/2018 10:23:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 10:23:00 PM	R49067
Xylenes, Total	0.36	0.32	1.5	J	µg/L	1	2/12/2018 10:23:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	87.0	0	70-130		%Rec	1	2/12/2018 10:23:00 PM	R49067
Surr: 4-Bromofluorobenzene	76.0	0	70-130		%Rec	1	2/12/2018 10:23:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 1:10:00 PM
Lab ID: 1802570-010
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	90.8	0	70-130		%Rec	1	2/12/2018 10:23:00 PM	R49067
Surr: Toluene-d8	84.5	0	70-130		%Rec	1	2/12/2018 10:23:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.017	0.0097	0.050	J	mg/L	1	2/12/2018 2:08:48 PM	R49065
Surr: BFB	110	0	70-130		%Rec	1	2/12/2018 2:08:48 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	79	0.63	1.0		mg/L	1	2/13/2018 11:17:24 AM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 11:17:24 AM	36464
Surr: DNOP	108	0	77.5-161		%Rec	1	2/13/2018 11:17:24 AM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.43	0.22	0.50	J	mg/L	5	2/23/2018 1:50:07 AM	R49314
Chloride	810	25	50		mg/L	100	2/27/2018 2:52:09 AM	R49384
Bromide	1.4	0.073	0.50		mg/L	5	2/23/2018 1:50:07 AM	R49314
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/23/2018 1:50:07 AM	R49314
Sulfate	92	0.48	2.5		mg/L	5	2/23/2018 1:50:07 AM	R49314
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/23/2018 5:08:37 AM	R49314
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.068	0.00099	0.0020		mg/L	1	2/12/2018 4:27:53 PM	B49061
Cadmium	ND	0.0010	0.0020		mg/L	1	2/12/2018 4:27:53 PM	B49061
Calcium	21	0.078	1.0		mg/L	1	2/12/2018 4:27:53 PM	B49061
Chromium	ND	0.0013	0.0060		mg/L	1	2/12/2018 4:27:53 PM	B49061
Copper	ND	0.0032	0.0060		mg/L	1	2/12/2018 4:27:53 PM	B49061
Iron	0.28	0.016	0.020		mg/L	1	2/12/2018 4:27:53 PM	B49061
Magnesium	2.7	0.25	1.0		mg/L	1	2/12/2018 4:27:53 PM	B49061
Manganese	0.21	0.00039	0.0020	*	mg/L	1	2/12/2018 4:27:53 PM	B49061
Potassium	1.5	0.11	1.0		mg/L	1	2/12/2018 4:27:53 PM	B49061
Silver	ND	0.0018	0.0050		mg/L	1	2/12/2018 4:27:53 PM	B49061
Sodium	660	1.6	10		mg/L	10	2/12/2018 9:55:56 PM	B49061
Zinc	0.0068	0.0021	0.010	J	mg/L	1	2/12/2018 4:27:53 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.080	0.0010	0.0020		mg/L	1	2/16/2018 3:58:23 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:58:23 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 3:58:23 PM	36554
Copper	0.0046	0.0041	0.0060	J	mg/L	1	2/16/2018 3:58:23 PM	36554
Iron	0.75	0.010	0.020	*	mg/L	1	2/16/2018 3:58:23 PM	36554
Manganese	0.22	0.0011	0.0020	*	mg/L	1	2/16/2018 3:58:23 PM	36554
Silver	ND	0.0012	0.0050		mg/L	1	2/16/2018 3:58:23 PM	36554
Zinc	0.0079	0.0033	0.010	J	mg/L	1	2/16/2018 3:58:23 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/19/2018 11:25:05 PM	C49231
Lead	ND	0.00017	0.00050		mg/L	1	2/13/2018 1:06:08 AM	D49096
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 8:17:28 PM	C49267
Uranium	0.0083	0.000096	0.00050		mg/L	1	2/13/2018 1:06:08 AM	D49096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 11:03:19 AM	36554
Lead	0.0020	0.0011	0.0025	J	mg/L	5	2/19/2018 4:22:44 PM	36554
Selenium	ND	0.0098	0.010		mg/L	10	2/22/2018 7:12:52 PM	36554
Uranium	0.0095	0.00034	0.0025		mg/L	5	2/21/2018 11:03:19 AM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000073	0.000037	0.00020	J	mg/L	1	2/23/2018 11:53:10 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzoic acid	ND	3.9	20		µg/L	1	2/28/2018 5:28:33 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 5:28:33 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 5:28:33 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 5:28:33 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 5:28:33 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 5:28:33 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 5:28:33 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Naphthalene	10	2.9	10	J	µg/L	1	2/28/2018 5:28:33 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 5:28:33 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 5:28:33 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 5:28:33 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 5:28:33 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 5:28:33 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 5:28:33 PM	36488
Surr: 2-Fluorophenol	33.0	0	15-114		%Rec	1	2/28/2018 5:28:33 PM	36488
Surr: Phenol-d5	30.2	0	15-97.9		%Rec	1	2/28/2018 5:28:33 PM	36488
Surr: 2,4,6-Tribromophenol	0	0	15-161	S	%Rec	1	2/28/2018 5:28:33 PM	36488
Surr: Nitrobenzene-d5	48.5	0	29.3-120		%Rec	1	2/28/2018 5:28:33 PM	36488
Surr: 2-Fluorobiphenyl	57.9	0	17.5-116		%Rec	1	2/28/2018 5:28:33 PM	36488
Surr: 4-Terphenyl-d14	38.8	0	21-92.2		%Rec	1	2/28/2018 5:28:33 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8.4	0.062	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Toluene	0.56	0.064	1.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
Ethylbenzene	1.5	0.093	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Methyl tert-butyl ether (MTBE)	3.3	0.24	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2,4-Trimethylbenzene	6.5	0.11	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,3,5-Trimethylbenzene	3.9	0.087	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2-Dichloroethane (EDC)	2.0	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Naphthalene	25	0.11	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1-Methylnaphthalene	16	0.16	4.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
2-Methylnaphthalene	9.1	0.15	4.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Acetone	36	0.82	10		µg/L	1	2/12/2018 10:47:00 PM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
2-Butanone	12	1.1	10		µg/L	1	2/12/2018 10:47:00 PM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/12/2018 10:47:00 PM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011 **Matrix:** AQUEOUS **Received Date:** 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1-Dichloroethene	0.26	0.081	1.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/12/2018 10:47:00 PM	R49067
Isopropylbenzene	0.51	0.051	1.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
4-Isopropyltoluene	4.4	0.096	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
4-Methyl-2-pentanone	3.6	0.71	10	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
n-Butylbenzene	0.43	0.13	3.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
n-Propylbenzene	0.42	0.074	1.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
sec-Butylbenzene	0.30	0.11	1.0	J	µg/L	1	2/12/2018 10:47:00 PM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/12/2018 10:47:00 PM	R49067
Xylenes, Total	32	0.32	1.5		µg/L	1	2/12/2018 10:47:00 PM	R49067
Surr: 1,2-Dichloroethane-d4	82.3	0	70-130		%Rec	1	2/12/2018 10:47:00 PM	R49067
Surr: 4-Bromofluorobenzene	80.0	0	70-130		%Rec	1	2/12/2018 10:47:00 PM	R49067
Surr: Dibromofluoromethane	88.2	0	70-130		%Rec	1	2/12/2018 10:47:00 PM	R49067
Surr: Toluene-d8	85.2	0	70-130		%Rec	1	2/12/2018 10:47:00 PM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018 2:10:00 PM
Lab ID: 1802570-011
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.46	0.0097	0.050		mg/L	1	2/12/2018 6:44:25 PM	R49065
Surr: BFB	120	0	70-130		%Rec	1	2/12/2018 6:44:25 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 6:54:31 PM	36464
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 6:54:31 PM	36464
Surr: DNOP	108	0	77.5-161		%Rec	1	2/13/2018 6:54:31 PM	36464
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	2/23/2018 2:14:56 AM	R49314
Chloride	7000	250	500		mg/L	1000	2/27/2018 3:04:34 AM	R49384
Bromide	3.8	0.073	0.50		mg/L	5	2/23/2018 2:14:56 AM	R49314
Phosphorus, Orthophosphate (As P)	3.2	1.2	2.5	H	mg/L	5	2/23/2018 2:14:56 AM	R49314
Sulfate	930	1.9	10		mg/L	20	2/23/2018 2:27:20 AM	R49314
Nitrate+Nitrite as N	12	1.3	10	*	mg/L	50	2/27/2018 3:54:12 AM	R49384
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.074	0.0049	0.010		mg/L	5	2/13/2018 8:56:15 PM	A49102
Cadmium	ND	0.0050	0.010		mg/L	5	2/12/2018 10:05:32 PM	B49061
Calcium	2100	3.9	50		mg/L	50	2/12/2018 10:07:56 PM	B49061
Chromium	ND	0.0064	0.030		mg/L	5	2/12/2018 10:05:32 PM	B49061
Copper	ND	0.016	0.030		mg/L	5	2/12/2018 10:05:32 PM	B49061
Iron	ND	0.082	0.10		mg/L	5	2/12/2018 10:05:32 PM	B49061
Magnesium	310	1.2	5.0		mg/L	5	2/12/2018 10:05:32 PM	B49061
Manganese	5.6	0.020	0.10	*	mg/L	50	2/12/2018 10:07:56 PM	B49061
Potassium	7.0	0.56	5.0		mg/L	5	2/12/2018 10:05:32 PM	B49061
Silver	0.059	0.0092	0.025		mg/L	5	2/27/2018 6:04:34 PM	A49429
Sodium	4900	8.2	50		mg/L	50	2/13/2018 8:58:33 PM	A49102
Zinc	ND	0.011	0.050		mg/L	5	2/12/2018 10:05:32 PM	B49061
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	2/16/2018 4:00:15 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 4:00:15 PM	36554
Chromium	ND	0.0018	0.0060		mg/L	1	2/16/2018 4:00:15 PM	36554
Copper	0.011	0.0041	0.0060		mg/L	1	2/16/2018 4:00:15 PM	36554
Iron	4.3	0.10	0.20	*	mg/L	10	2/20/2018 9:16:54 PM	36554
Manganese	4.4	0.011	0.020	*	mg/L	10	2/20/2018 9:16:54 PM	36554
Silver	0.028	0.0012	0.0050		mg/L	1	2/16/2018 4:00:15 PM	36554
Zinc	0.021	0.0033	0.010		mg/L	1	2/16/2018 4:00:15 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.021	0.050		mg/L	50	2/19/2018 11:30:00 PM	C49231
Lead	ND	0.0017	0.0050		mg/L	10	2/19/2018 11:39:48 PM	C49231
Selenium	ND	0.038	0.050		mg/L	50	2/20/2018 8:22:21 PM	C49267
Uranium	0.14	0.00096	0.0050	*	mg/L	10	2/19/2018 11:39:48 PM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.021	0.050		mg/L	50	2/21/2018 11:13:08 AM	36554
Lead	0.0088	0.0023	0.0050		mg/L	10	2/17/2018 2:37:50 PM	36554
Selenium	ND	0.049	0.050		mg/L	50	2/22/2018 7:15:55 PM	36554
Uranium	0.12	0.00068	0.0050	*	mg/L	10	2/17/2018 2:37:50 PM	36554
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000037	0.00020	J	mg/L	1	2/23/2018 11:55:08 AM	36668
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Benzoic acid	6.5	3.9	20	J	µg/L	1	2/28/2018 5:56:07 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 5:56:07 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 5:56:07 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 5:56:07 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 5:56:07 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 5:56:07 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 5:56:07 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 5:56:07 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 5:56:07 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 5:56:07 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 5:56:07 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 5:56:07 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 5:56:07 PM	36488
Surr: 2-Fluorophenol	2.53	0	15-114	S	%Rec	1	2/28/2018 5:56:07 PM	36488
Surr: Phenol-d5	4.10	0	15-97.9	S	%Rec	1	2/28/2018 5:56:07 PM	36488
Surr: 2,4,6-Tribromophenol	1.42	0	15-161	S	%Rec	1	2/28/2018 5:56:07 PM	36488
Surr: Nitrobenzene-d5	97.6	0	29.3-120		%Rec	1	2/28/2018 5:56:07 PM	36488
Surr: 2-Fluorobiphenyl	89.7	0	17.5-116		%Rec	1	2/28/2018 5:56:07 PM	36488
Surr: 4-Terphenyl-d14	65.7	0	21-92.2		%Rec	1	2/28/2018 5:56:07 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Acetone	ND	0.82	10		µg/L	1	2/13/2018 12:46:00 AM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 12:46:00 AM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 12:46:00 AM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 12:46:00 AM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 12:46:00 AM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 12:46:00 AM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 12:46:00 AM	R49067
Surr: 1,2-Dichloroethane-d4	85.1	0	70-130		%Rec	1	2/13/2018 12:46:00 AM	R49067
Surr: 4-Bromofluorobenzene	78.0	0	70-130		%Rec	1	2/13/2018 12:46:00 AM	R49067
Surr: Dibromofluoromethane	90.2	0	70-130		%Rec	1	2/13/2018 12:46:00 AM	R49067
Surr: Toluene-d8	86.3	0	70-130		%Rec	1	2/13/2018 12:46:00 AM	R49067
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: DUP03
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date: 2/7/2018
Lab ID: 1802570-012
Matrix: AQUEOUS
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/12/2018 2:54:54 PM	R49065
Surr: BFB	117	0	70-130		%Rec	1	2/12/2018 2:54:54 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802570-013
Matrix: TRIP BLANK
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Acetone	ND	0.82	10		µg/L	1	2/13/2018 1:09:00 AM	R49067
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 1:09:00 AM	R49067
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 1:09:00 AM	R49067
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 1st Qtr 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802570-013
Matrix: TRIP BLANK
Received Date: 2/9/2018 9:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 1:09:00 AM	R49067
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 1:09:00 AM	R49067
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 1:09:00 AM	R49067
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 1:09:00 AM	R49067
Surr: 1,2-Dichloroethane-d4	83.3	0	70-130		%Rec	1	2/13/2018 1:09:00 AM	R49067
Surr: 4-Bromofluorobenzene	77.4	0	70-130		%Rec	1	2/13/2018 1:09:00 AM	R49067
Surr: Dibromofluoromethane	87.4	0	70-130		%Rec	1	2/13/2018 1:09:00 AM	R49067
Surr: Toluene-d8	85.9	0	70-130		%Rec	1	2/13/2018 1:09:00 AM	R49067

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49061**	RunNo: **49061**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580117** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0018	0.0020	0.002000	0	87.5	50	150			J

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49061**	RunNo: **49061**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49061**	RunNo: **49061**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	109	50	150			
Calcium	0.54	1.0	0.5000	0	108	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.7	50	150			J
Copper	0.0065	0.0060	0.006000	0	109	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0055	0.0050	0.005000	0	110	50	150			
Sodium	0.34	1.0	0.5000	0	68.9	50	150			J
Zinc	0.0045	0.010	0.005000	0	90.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49061**	RunNo: **49061**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	50	1.0	50.00	0	99.2	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	48	1.0	50.00	0	95.9	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Sodium	47	1.0	50.00	0	93.3	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49102**	RunNo: **49102**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49102**	RunNo: **49102**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Sodium	0.47	1.0	0.5000	0	94.4	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49102**	RunNo: **49102**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	99.0	85	115			
Sodium	47	1.0	50.00	0	94.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	107	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49429**	RunNo: **49429**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49429**	RunNo: **49429**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0047	0.0050	0.005000	0	94.0	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49429**	RunNo: **49429**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	112	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-36554**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36554**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	77.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	94.0	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.7	50	150			J
Copper	0.0061	0.0060	0.006000	0	101	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Zinc	0.0062	0.010	0.005000	0	124	50	150			J

Sample ID **LCS-36554**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1588521** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.57	0.020	0.5000	0	114	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.47	0.010	0.5000	0	95.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D49096**	RunNo: **49096**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49096**	RunNo: **49096**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.5	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D49096**	RunNo: **49096**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1580922** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	93.2	85	115			
Uranium	0.012	0.00050	0.01250	0	94.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00076	0.0010	0.001000	0	75.7	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.8	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586627** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.1	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Uranium	0.011	0.00050	0.01250	0	91.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588371** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00073	0.0010	0.001000	0	73.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588375** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49231**	RunNo:	**49231**					
Prep Date:		Analysis Date:	**2/19/2018**	SeqNo:	**1588407**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00073	0.0010	0.001000	0	73.0	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49231**	RunNo:	**49231**					
Prep Date:		Analysis Date:	**2/19/2018**	SeqNo:	**1588408**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.4	85	115			
Uranium	0.012	0.00050	0.01250	0	99.1	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B49267**	RunNo:	**49267**					
Prep Date:		Analysis Date:	**2/20/2018**	SeqNo:	**1589547**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B49267**	RunNo:	**49267**					
Prep Date:		Analysis Date:	**2/20/2018**	SeqNo:	**1589548**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00093	0.0010	0.001000	0	92.7	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49267**	RunNo:	**49267**					
Prep Date:		Analysis Date:	**2/20/2018**	SeqNo:	**1589549**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C49267**	RunNo:	**49267**					
Prep Date:		Analysis Date:	**2/20/2018**	SeqNo:	**1589584**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49267**	RunNo: **49267**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00092	0.0010	0.001000	0	92.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49267**	RunNo: **49267**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589586** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	91.7	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00090	0.0010	0.001000	0	90.5	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591421** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	91.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36554**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586950**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36554**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586951**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00047	0.00050	0.0005000	0	94.8	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID	**MSLCS-36554**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586952**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Uranium	0.012	0.00050	0.01250	0	98.1	85	115			

Sample ID	**MB-36554**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36554**	RunNo:	**49226**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/19/2018**	SeqNo:	**1588114**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLCS-36554**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36554**	RunNo:	**49226**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/19/2018**	SeqNo:	**1588116**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	88.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MSLLLCS-36554**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588117**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00054	0.0010	0.001000	0	54.2	50	150			J

Sample ID	**1802570-001GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-30**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588129**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.015	0.00050	0.01250	0.002454	97.3	70	130			

Sample ID	**1802570-001GLLMS**	SampType: **MSDLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-30**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588130**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.015	0.00050	0.01250	0.002454	96.7	70	130	0.553	20	

Sample ID	**1802570-001GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-30**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588132**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.043	0.0025	0.01250	0.03012	102	70	130			

Sample ID	**1802570-001GLLMS**	SampType: **MSDLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-30**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588133**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.043	0.0025	0.01250	0.03012	104	70	130	0.644	20	

Sample ID	**1802570-010GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-41**	Batch ID: **36554**			RunNo: **49226**					
Prep Date:	**2/15/2018**	Analysis Date: **2/19/2018**			SeqNo: **1588151**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.014	0.0025	0.01250	0.002579	95.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802570-001GLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-30** Batch ID: **36554** RunNo: **49280**
Prep Date: **2/15/2018** Analysis Date: **2/21/2018** SeqNo: **1590185** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.001656	94.4	70	130			

Sample ID **1802570-001GLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-30** Batch ID: **36554** RunNo: **49280**
Prep Date: **2/15/2018** Analysis Date: **2/21/2018** SeqNo: **1590186** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.001656	92.7	70	130	1.75	20	

Sample ID **1802570-010GLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-41** Batch ID: **36554** RunNo: **49280**
Prep Date: **2/15/2018** Analysis Date: **2/21/2018** SeqNo: **1590202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.030	0.0025	0.01250	0.01625	106	70	130			

Sample ID **1802570-001GLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-30** Batch ID: **36554** RunNo: **49335**
Prep Date: **2/15/2018** Analysis Date: **2/22/2018** SeqNo: **1592704** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0050	0.02500	0	106	70	130			

Sample ID **1802570-001GLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-30** Batch ID: **36554** RunNo: **49335**
Prep Date: **2/15/2018** Analysis Date: **2/22/2018** SeqNo: **1592705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.027	0.0050	0.02500	0	107	70	130	1.00	20	

Sample ID **1802570-010GLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-41** Batch ID: **36554** RunNo: **49335**
Prep Date: **2/15/2018** Analysis Date: **2/22/2018** SeqNo: **1592717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.064	0.0050	0.02500	0.03803	105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36668**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36668**	RunNo:	**49349**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1593085**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000064	0.00020								J

Sample ID	**LCS-36668**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36668**	RunNo:	**49349**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1593086**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1593180** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.33	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1593181** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	107	90	110			
Chloride	4.8	0.50	5.000	0	96.9	90	110			
Bromide	2.5	0.10	2.500	0	99.0	90	110			
Phosphorus, Orthophosphate (As P	5.3	0.50	5.000	0	105	90	110			
Sulfate	9.7	0.50	10.00	0	96.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID **1802570-009EMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-32**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.7	0.50	2.500	0	106	55.8	133			
Bromide	12	0.50	12.50	1.198	88.5	78.7	107			
Sulfate	150	2.5	50.00	92.79	105	84.3	120			

Sample ID **1802570-009EMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-32**	Batch ID: **R49314**	RunNo: **49314**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.6	0.50	2.500	0	104	55.8	133	1.79	20	
Bromide	12	0.50	12.50	1.198	87.7	78.7	107	0.877	20	
Sulfate	140	2.5	50.00	92.79	100	84.3	120	1.62	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49384**	RunNo: **49384**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49384**	RunNo: **49384**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49479**	RunNo: **49479**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1598519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49479**	RunNo: **49479**
Prep Date:	Analysis Date: **2/28/2018**	SeqNo: **1598520** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.2	90	110			
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Bromide	2.4	0.10	2.500	0	94.8	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.3	0.50	10.00	0	92.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49508**	RunNo: **49508**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599773** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**
16-Mar-18

Client: Western Refining Southwest, Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49508**	RunNo: **49508**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599774** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**
16-Mar-18

Client: Western Refining Southwest, Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**MB-36459**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581212**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-36459**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581213**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	106	70	130			

Sample ID	**1802570-001CMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-30**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581244**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.0094	0.09434	0	108	57.7	132			

Sample ID	**1802570-001CMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-30**	Batch ID:	**36459**	RunNo:	**49108**					
Prep Date:	**2/12/2018**	Analysis Date:	**2/12/2018**	SeqNo:	**1581245**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.094	0.0094	0.09434	0	99.4	57.7	132	7.91	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **LCS-36464**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36464**	RunNo: **49068**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1579504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.3	92.3	135			
Surr: DNOP	0.52		0.5000		104	77.5	161			

Sample ID **MB-36464**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36464**	RunNo: **49068**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1579505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	77.5	161			

Sample ID **1802570-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-30**	Batch ID: **36464**	RunNo: **49068**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580675** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	119	83.3	151			
Surr: DNOP	0.61		0.5000		123	77.5	161			

Sample ID **1802570-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-30**	Batch ID: **36464**	RunNo: **49068**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580676** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	83.3	151	11.6	20	
Surr: DNOP	0.54		0.5000		107	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.5	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.5	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.3	70	130			
Surr: Toluene-d8	8.6		10.00		86.2	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49067**	RunNo: **49067**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.2	70	130			
Surr: 4-Bromofluorobenzene	7.5		10.00		75.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.2	70	130			
Surr: Toluene-d8	8.7		10.00		86.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802570-004cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-29** Batch ID: **36488** RunNo: **49466**

Prep Date: **2/13/2018** Analysis Date: **2/28/2018** SeqNo: **1597578** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.9	15	123			
4-Chloro-3-methylphenol	160	10	200.0	0	79.3	26.6	118			
2-Chlorophenol	160	10	200.0	0	77.9	15	120			
1,4-Dichlorobenzene	67	10	100.0	0	67.4	19	108			
2,4-Dinitrotoluene	76	10	100.0	0	76.5	27.8	103			
N-Nitrosodi-n-propylamine	79	10	100.0	0	78.5	32.3	126			
4-Nitrophenol	68	10	200.0	0	34.0	15	72.1			
Pentachlorophenol	140	20	200.0	0	69.2	15	114			
Phenol	87	10	200.0	0	43.3	15	67.5			
Pyrene	81	10	100.0	0	80.9	31.2	112			
1,2,4-Trichlorobenzene	77	10	100.0	0	77.3	22.1	123			
Surr: 2-Fluorophenol	110		200.0		54.6	15	114			
Surr: Phenol-d5	82		200.0		41.2	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		76.7	15	161			
Surr: Nitrobenzene-d5	83		100.0		82.5	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.2	17.5	116			
Surr: 4-Terphenyl-d14	55		100.0		55.4	21	92.2			

Sample ID **1802570-004cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-29** Batch ID: **36488** RunNo: **49466**

Prep Date: **2/13/2018** Analysis Date: **2/28/2018** SeqNo: **1597579** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	85	10	100.0	0	84.7	15	123	5.84	30.5	
4-Chloro-3-methylphenol	160	10	200.0	0	77.7	26.6	118	2.00	50	
2-Chlorophenol	160	10	200.0	0	82.1	15	120	5.34	36.3	
1,4-Dichlorobenzene	65	10	100.0	0	64.8	19	108	3.96	42.1	
2,4-Dinitrotoluene	81	10	100.0	0	81.4	27.8	103	6.18	28.5	
N-Nitrosodi-n-propylamine	85	10	100.0	0	85.2	32.3	126	8.09	25.4	
4-Nitrophenol	97	10	200.0	0	48.6	15	72.1	35.3	50	
Pentachlorophenol	140	20	200.0	0	72.0	15	114	3.91	50	
Phenol	76	10	200.0	0	38.1	15	67.5	12.7	46.1	
Pyrene	86	10	100.0	0	85.7	31.2	112	5.74	34.3	
1,2,4-Trichlorobenzene	73	10	100.0	0	73.1	22.1	123	5.50	43.6	
Surr: 2-Fluorophenol	100		200.0		51.9	15	114	0	0	
Surr: Phenol-d5	73		200.0		36.6	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		73.9	15	161	0	0	
Surr: Nitrobenzene-d5	87		100.0		86.7	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	81		100.0		81.1	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802570-004cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597579** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	48		100.0		48.1	21	92.2	0	0	

Sample ID **LCS-36488**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	82	10	100.0	0	82.1	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	87.2	40.5	108			
2-Chlorophenol	180	10	200.0	0	90.2	35	103			
1,4-Dichlorobenzene	75	10	100.0	0	74.9	24.7	93.7			
2,4-Dinitrotoluene	81	10	100.0	0	81.2	35.6	91.4			
N-Nitrosodi-n-propylamine	92	10	100.0	0	92.3	41.6	114			
4-Nitrophenol	130	10	200.0	0	62.7	20.7	74.3			
Pentachlorophenol	140	20	200.0	0	71.3	25.3	98.5			
Phenol	140	10	200.0	0	68.1	20.9	75.1			
Pyrene	82	10	100.0	0	82.1	45.6	108			
1,2,4-Trichlorobenzene	80	10	100.0	0	80.4	30.3	106			
Surr: 2-Fluorophenol	150		200.0		76.7	15	114			
Surr: Phenol-d5	130		200.0		66.4	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		82.6	15	161			
Surr: Nitrobenzene-d5	87		100.0		86.5	29.3	120			
Surr: 2-Fluorobiphenyl	80		100.0		80.1	17.5	116			
Surr: 4-Terphenyl-d14	56		100.0		55.8	21	92.2			

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**
16-Mar-18

Client: Western Refining Southwest, Gallup
Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	7.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		53.2	15	114			
Surr: Phenol-d5	81		200.0		40.3	15	97.9			
Surr: 2,4,6-Tribromophenol	120		200.0		59.8	15	161			
Surr: Nitrobenzene-d5	69		100.0		68.9	29.3	120			
Surr: 2-Fluorobiphenyl	58		100.0		58.2	17.5	116			
Surr: 4-Terphenyl-d14	38		100.0		37.6	21	92.2			

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID	**lcs-36823**	SampType:	**LCS**	TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSW**	Batch ID:	**36823**	RunNo:	**49662**					
Prep Date:	**3/5/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605966**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID	**mb-36823**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**					
Client ID:	**PBW**	Batch ID:	**36823**	RunNo:	**49662**					
Prep Date:	**3/5/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605967**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802570**

16-Mar-18

Client: Western Refining Southwest, Gallup

Project: 1st Qtr 2018 GW Sampling MKTF

Sample ID **1802570-005ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579369** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	44	2.5	25.00	21.29	89.0	70	130			
Surr: BFB	500		500.0		101	70	130			

Sample ID **1802570-005amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579370** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	43	2.5	25.00	21.29	88.1	70	130	0.530	20	
Surr: BFB	510		500.0		101	70	130	0	0	

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.9	70	130			
Surr: BFB	10		10.00		102	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1802570** RcptNo: **1**

Received By: **Sophia Campuzano** **2/9/2018 9:40:00 AM** Sophia Campuzano

Completed By: **Ashley Gallegos** **2/9/2018 10:20:53 AM** AG

Reviewed By: DDS 2/9/18

Labeled By: SRC 02/09/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? no

Checked by: [signature]

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ ~~NA ☑~~

Person Notified:	T Payne
By Whom:	AG
Regarding:	Collection Date for MK TF-32
Client Instructions:	collection date 15 02/07/18 / AG 02/12/18

Date: Via: ☐ eMail ☒ Phone ☐ Fax ☐ In Person

16. Additional remarks:

Custody seals present and intact. 02/09/18 SRC

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Yes			
2	0.6	Good	Yes			
3	0.8	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1802570** RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	1.3	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/6/18	1015	WATER	MKTF-30	40ML VOA-5	HCL	-001			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓												
				1L AMBER-1	NEAT												✓						
				250 ML AMBER-1	NEAT				✓														
				250 ML PLASTIC-1	HNO_3													✓					
				125 ML PLASTIC-1	HNO_3													✓	✓				
				125 ML PLASTIC-1	H_2SO_4														✓				
				125 NL PLASTIC-1	NEAT														✓				
	1125	WATER	MKTF-28	40 ML VOA-5	HCL	-002			✓							✓						
				1 L AMBER-1	NEAT												✓						
				~~250~~ HL AMBER-1	NEAT				✓														
				250 ML PLASTIC-1	HNO_3													✓					

Date: 2/8/18 Time: 0700 Relinquished by:

Received by: courier Date: 02/09/18 Time: 0940

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: Cooler
1 = 0.2
2 = 0.6
3 = 0.8
4 = 1.3

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/6/18	1125	WATER	MKTF-28	125 ML PLASTIC-1	HNO_3	-002											✓	✓			
				125 ML PLASTIC-1	H_2SO_4													✓			
				125 ML PLASTIC-1	NEAT													✓			
	1220	WATER	MKTF-27	40ML VOA-5	HCL	-003			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	HNO_3														✓			
				125ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	1345	WATER	MKTF-29	40ML VOA-5	HCL	-004										✓						
				1 L AMBER-2	NEAT												✓					

Date: 2/8/18 Time: 0700 Relinquished by:
Received by: Courier Date: 02/09/18 Time: 0940
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks: Coolers
1 = 0.2 4 = 1.3
2 = 0.6
3 = 0.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570
2/6/18	1345	WATER	MKTF-29	250 ML AMBER-1	NEAT	-0054
				250 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	
				125 ML PLASTIC-1	NEAT	
	1445	WATER	MKTF-24	40 ML VOA-5	HCL	-0065
				40 ML VOA-3	$Na_2S_2O_3$	
				1 L AMBER-1	NEAT	
				250ML AMBER-1	NEAT	
				~~250~~ ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	HNO_3	
				125 ML PLASTIC-1	H_2SO_4	

Analysis Request

	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS		Air Bubbles (Y or N)
2/6/18 1345 WATER MKTF-29			✓										TP		
												✓	~~TP~~		
												✓	✓		
													✓		
													✓		
1445 WATER MKTF-24			✓							✓					
					✓										
											✓				
			✓												
												✓			
												✓	✓		
													✓		

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/8/18	0700		courier		
			Sph C	02/09/18	0940
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Coolers
1 = 0.2 4 = 1.3
2 = 0.6
3 = 0.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/6/18	1445	WATER	MKTF-24	125 ML PLASTIC-1	NEAT	-0065													✓			
	1520	WATER	MKTF-02	40 ML VOA-5	HCL	-001			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓											
				1L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	—	WATER	DUP02	40 ML VOA-5	HCL	-007			✓							✓						
				1L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													

Date: 2/8/18 Time: 0700 Relinquished by: _____

Received by: courier Date: 02/09/18 Time: 0940

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: Coolers
1=0.2 4=1.3
2=0.6
3=0.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/6/18	—	WATER	DUP02	250 ML PLASTIC-1	HNO_3	-008 001												✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			
2/7/18	0910	WATER	MKTF-43	40 ML VOA-5	HCL	-008			✓							✓						
				1 L AMBER-2	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT														✓			

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/8/18	0700		courier		
			Sysh C	02/09/18	0940
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: coolers
1=0.2 4=1.3
2=0.6
3=0.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/7/18	1105	WATER	MKTF-32	40 ML VOA-5	HCL	-009			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓											
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	1310	WATER	MKTF-41	TP ~~125 ML PLASTIC~~ 40 ML VOA-5	HCL	-010			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓											
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓									~~✓~~ TP				

Date: 2/8/18 Time: 0700 Relinquished by:

Received by: courier Date: 02/09/18 Time: 0940

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: Coolers 1=0.2 2=0.6 3=0.8 4=1.3

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

1 of 5

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/1/18	1310	WATER	MKTF-41	250 ML PLASTIC-1	HNO_3	-01D												✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			
	1410	WATER	MKTF-42	40 ML VOA-5	HCL	-01A1			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
				125 ML PLASTIC-1	NEAT														✓			

Date: 2/8/18 Time: 0700 Relinquished by:
Date: Time: Relinquished by:

Received by: courier Date: 02/09/18 Time: 0940
Received by: Date: Time:

Remarks: Coolers 1=0.2 2=0.6 3=0.8 4=1.3

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802570	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/7/18	—	WATER	DUP03	40 ML VOA-5	HCL	-0132			✓							✓						
				1 L AMBER-1	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓			125 ML PLASTIC	NEAT														✓			
2/7/18	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	-0143										✓						

Date: 2/8/18 Time: 0700 Relinquished by:
Received by: courier Date: 02/09/18 Time: 0940

Date: Time: Relinquished by:
Received by: Date: Time:

Remarks: Coolers
1 = 0.2
2 = 0.6
3 = 0.8
4 = 1.3

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 08, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling MKTF OrderNo.: 1802641

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/10/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 12:49:14 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 12:49:14 PM	36465
Surr: DNOP	124	0	77.5-161		%Rec	1	2/13/2018 12:49:14 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/20/2018 6:37:53 PM	R49284
Chloride	390	5.0	10		mg/L	20	2/20/2018 6:50:45 PM	R49284
Bromide	0.60	0.073	0.50		mg/L	5	2/20/2018 6:37:53 PM	R49284
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/20/2018 6:37:53 PM	R49284
Sulfate	100	0.48	2.5		mg/L	5	2/20/2018 6:37:53 PM	R49284
Nitrate+Nitrite as N	2.1	0.13	1.0		mg/L	5	2/27/2018 5:36:15 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.039	0.00099	0.0020		mg/L	1	2/14/2018 5:19:06 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:19:06 PM	A49128
Calcium	8.9	0.078	1.0		mg/L	1	2/14/2018 5:19:06 PM	A49128
Chromium	0.0033	0.0013	0.0060	J	mg/L	1	2/14/2018 5:19:06 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:19:06 PM	A49128
Iron	ND	0.016	0.020		mg/L	1	2/14/2018 5:19:06 PM	A49128
Magnesium	0.73	0.25	1.0	J	mg/L	1	2/14/2018 5:19:06 PM	A49128
Manganese	0.00056	0.00039	0.0020	J	mg/L	1	2/14/2018 5:19:06 PM	A49128
Potassium	1.2	0.11	1.0		mg/L	1	2/14/2018 5:19:06 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	2/14/2018 5:19:06 PM	A49128
Sodium	520	1.6	10		mg/L	10	2/14/2018 6:16:19 PM	A49128
Zinc	0.0057	0.0021	0.010	J	mg/L	1	2/14/2018 5:19:06 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.096	0.0010	0.0020		mg/L	1	2/23/2018 9:11:29 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:41:51 PM	36678
Chromium	0.0088	0.0018	0.0060		mg/L	1	2/23/2018 9:11:29 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:11:29 PM	36678
Iron	4.7	0.051	0.10	*	mg/L	5	2/27/2018 6:44:30 PM	36678
Manganese	0.092	0.0011	0.0020	*	mg/L	1	2/23/2018 9:11:29 PM	36678
Silver	ND	0.0012	0.0050		mg/L	1	2/27/2018 9:11:57 PM	36678
Zinc	0.020	0.0033	0.010		mg/L	1	3/1/2018 4:41:51 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0075	0.00042	0.0010		mg/L	1	2/19/2018 11:44:42 PM	C49231
Lead	ND	0.00017	0.00050		mg/L	1	2/19/2018 11:44:42 PM	C49231
Selenium	ND	0.015	0.020		mg/L	20	2/21/2018 8:20:52 PM	B49298
Uranium	0.17	0.0019	0.010	*	mg/L	20	2/21/2018 8:20:52 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0095	0.00041	0.0010		mg/L	1	2/27/2018 12:59:45 PM	36678
Lead	0.0056	0.00023	0.00050		mg/L	1	2/27/2018 12:59:45 PM	36678
Selenium	0.011	0.00098	0.0010		mg/L	1	3/6/2018 4:09:56 PM	36810
Uranium	0.18	0.0014	0.010	*	mg/L	20	2/28/2018 5:16:58 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000079	0.000037	0.00020	J	mg/L	1	2/23/2018 12:09:28 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Benzoic acid	12	3.9	20	J	µg/L	1	2/28/2018 6:23:36 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 6:23:36 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 6:23:36 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 6:23:36 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 6:23:36 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 6:23:36 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 6:23:36 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 6:23:36 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 6:23:36 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 6:23:36 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 6:23:36 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 6:23:36 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 6:23:36 PM	36488
Surr: 2-Fluorophenol	63.6	0	15-114		%Rec	1	2/28/2018 6:23:36 PM	36488
Surr: Phenol-d5	48.9	0	15-97.9		%Rec	1	2/28/2018 6:23:36 PM	36488
Surr: 2,4,6-Tribromophenol	90.8	0	15-161		%Rec	1	2/28/2018 6:23:36 PM	36488
Surr: Nitrobenzene-d5	88.3	0	29.3-120		%Rec	1	2/28/2018 6:23:36 PM	36488
Surr: 2-Fluorobiphenyl	81.5	0	17.5-116		%Rec	1	2/28/2018 6:23:36 PM	36488
Surr: 4-Terphenyl-d14	88.3	0	21-92.2		%Rec	1	2/28/2018 6:23:36 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2,4-Trimethylbenzene	0.12	0.11	1.0	J	µg/L	1	2/13/2018 1:42:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 1:42:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 1:42:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 1:42:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 1:42:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 1:42:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 1:42:00 PM	R49114
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 1:42:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	83.6	0	70-130		%Rec	1	2/13/2018 1:42:00 PM	R49114
Surr: 4-Bromofluorobenzene	76.0	0	70-130		%Rec	1	2/13/2018 1:42:00 PM	R49114
Surr: Dibromofluoromethane	87.0	0	70-130		%Rec	1	2/13/2018 1:42:00 PM	R49114
Surr: Toluene-d8	85.0	0	70-130		%Rec	1	2/13/2018 1:42:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 9:20:00 AM
Lab ID: 1802641-001
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.010	0.0097	0.050	J	mg/L	1	2/12/2018 4:26:46 PM	R49065
Surr: BFB	113	0	70-130		%Rec	1	2/12/2018 4:26:46 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 1:55:22 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 1:55:22 PM	36465
Surr: DNOP	124	0	77.5-161		%Rec	1	2/13/2018 1:55:22 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/20/2018 7:03:36 PM	R49284
Chloride	100	5.0	10		mg/L	20	2/20/2018 7:16:27 PM	R49284
Bromide	0.56	0.073	0.50		mg/L	5	2/20/2018 7:03:36 PM	R49284
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/20/2018 7:03:36 PM	R49284
Sulfate	280	1.9	10		mg/L	20	2/20/2018 7:16:27 PM	R49284
Nitrate+Nitrite as N	0.18	0.13	1.0	J	mg/L	5	2/27/2018 6:25:51 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.040	0.00099	0.0020		mg/L	1	2/14/2018 5:21:05 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:21:05 PM	A49128
Calcium	74	0.078	1.0		mg/L	1	2/14/2018 5:21:05 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:21:05 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:21:05 PM	A49128
Iron	ND	0.016	0.020		mg/L	1	2/14/2018 5:21:05 PM	A49128
Magnesium	16	0.25	1.0		mg/L	1	2/14/2018 5:21:05 PM	A49128
Manganese	0.26	0.00039	0.0020	*	mg/L	1	2/14/2018 5:21:05 PM	A49128
Potassium	0.93	0.11	1.0	J	mg/L	1	2/14/2018 5:21:05 PM	A49128
Silver	0.0025	0.0018	0.0050	J	mg/L	1	2/14/2018 5:21:05 PM	A49128
Sodium	280	0.82	5.0		mg/L	5	2/14/2018 6:18:11 PM	A49128
Zinc	0.0070	0.0021	0.010	J	mg/L	1	2/14/2018 5:21:05 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	2/23/2018 9:13:13 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:43:22 PM	36678
Chromium	0.0020	0.0018	0.0060	J	mg/L	1	2/23/2018 9:13:13 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:13:13 PM	36678
Iron	4.0	0.051	0.10	*	mg/L	5	2/27/2018 6:48:11 PM	36678
Manganese	0.41	0.0011	0.0020	*	mg/L	1	2/23/2018 9:13:13 PM	36678
Silver	0.0017	0.0012	0.0050	J	mg/L	1	2/27/2018 9:13:48 PM	36678
Zinc	0.011	0.0033	0.010		mg/L	1	3/1/2018 4:43:22 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	2/19/2018 11:59:24 PM	C49231
Lead	ND	0.00017	0.00050		mg/L	1	2/19/2018 11:59:24 PM	C49231
Selenium	ND	0.0038	0.0050		mg/L	5	2/21/2018 8:25:47 PM	B49298
Uranium	0.036	0.00048	0.0025	*	mg/L	5	2/21/2018 8:25:47 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0018	0.00041	0.0010		mg/L	1	2/27/2018 1:04:39 PM	36678
Lead	0.0037	0.00023	0.00050		mg/L	1	2/27/2018 1:04:39 PM	36678
Selenium	0.0015	0.00098	0.0010		mg/L	1	3/6/2018 4:14:51 PM	36810
Uranium	0.035	0.00034	0.0025	*	mg/L	5	2/28/2018 5:26:48 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000098	0.000037	0.00020	J	mg/L	1	2/23/2018 12:15:10 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Benzoic acid	7.2	3.9	20	J	µg/L	1	2/28/2018 6:51:01 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 6:51:01 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 6:51:01 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 6:51:01 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 6:51:01 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 6:51:01 PM	36488
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 6:51:01 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 6:51:01 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 6:51:01 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 6:51:01 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Phenol	ND	3.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 6:51:01 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 6:51:01 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 6:51:01 PM	36488
Surr: 2-Fluorophenol	43.7	0	15-114		%Rec	1	2/28/2018 6:51:01 PM	36488
Surr: Phenol-d5	34.4	0	15-97.9		%Rec	1	2/28/2018 6:51:01 PM	36488
Surr: 2,4,6-Tribromophenol	69.7	0	15-161		%Rec	1	2/28/2018 6:51:01 PM	36488
Surr: Nitrobenzene-d5	68.3	0	29.3-120		%Rec	1	2/28/2018 6:51:01 PM	36488
Surr: 2-Fluorobiphenyl	63.4	0	17.5-116		%Rec	1	2/28/2018 6:51:01 PM	36488
Surr: 4-Terphenyl-d14	82.9	0	21-92.2		%Rec	1	2/28/2018 6:51:01 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Methyl tert-butyl ether (MTBE)	410	2.4	10		µg/L	10	2/13/2018 2:54:00 PM	R49114
1,2,4-Trimethylbenzene	0.37	0.11	1.0	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
1,3,5-Trimethylbenzene	0.15	0.087	1.0	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1-Methylnaphthalene	0.49	0.16	4.0	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
2-Methylnaphthalene	0.54	0.15	4.0	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 3:18:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 3:18:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 3:18:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 3:18:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 3:18:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
sec-Butylbenzene	0.12	0.11	1.0	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 3:18:00 PM	R49114
Xylenes, Total	0.55	0.32	1.5	J	µg/L	1	2/13/2018 3:18:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	81.6	0	70-130		%Rec	1	2/13/2018 3:18:00 PM	R49114
Surr: 4-Bromofluorobenzene	76.3	0	70-130		%Rec	1	2/13/2018 3:18:00 PM	R49114
Surr: Dibromofluoromethane	87.5	0	70-130		%Rec	1	2/13/2018 3:18:00 PM	R49114
Surr: Toluene-d8	84.9	0	70-130		%Rec	1	2/13/2018 3:18:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 10:25:00 AM
Lab ID: 1802641-002 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.22	0.0097	0.050		mg/L	1	2/12/2018 4:49:43 PM	R49065
Surr: BFB	112	0	70-130		%Rec	1	2/12/2018 4:49:43 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.9	0.63	1.0		mg/L	1	2/13/2018 2:17:27 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 2:17:27 PM	36465
Surr: DNOP	128	0	77.5-161		%Rec	1	2/13/2018 2:17:27 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.24	0.22	0.50	J	mg/L	5	2/20/2018 7:29:19 PM	R49284
Chloride	110	5.0	10		mg/L	20	2/20/2018 7:42:11 PM	R49284
Bromide	0.88	0.073	0.50		mg/L	5	2/20/2018 7:29:19 PM	R49284
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/20/2018 7:29:19 PM	R49284
Sulfate	5.2	0.48	2.5		mg/L	5	2/20/2018 7:29:19 PM	R49284
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/27/2018 6:38:16 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.0	0.0049	0.010		mg/L	5	2/14/2018 6:20:09 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:23:12 PM	A49128
Calcium	120	0.39	5.0		mg/L	5	2/14/2018 6:20:09 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:23:12 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:23:12 PM	A49128
Iron	1.0	0.082	0.10	*	mg/L	5	2/14/2018 6:20:09 PM	A49128
Magnesium	25	0.25	1.0		mg/L	1	2/14/2018 5:23:12 PM	A49128
Manganese	2.2	0.0020	0.010	*	mg/L	5	2/14/2018 6:20:09 PM	A49128
Potassium	0.69	0.11	1.0	J	mg/L	1	2/14/2018 5:23:12 PM	A49128
Silver	0.0035	0.0018	0.0050	J	mg/L	1	2/14/2018 5:23:12 PM	A49128
Sodium	220	0.82	5.0		mg/L	5	2/14/2018 6:20:09 PM	A49128
Zinc	0.0055	0.0021	0.010	J	mg/L	1	2/14/2018 5:23:12 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.4	0.0050	0.010		mg/L	5	2/27/2018 6:52:05 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:45:14 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:14:58 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:14:58 PM	36678
Iron	8.3	0.10	0.20	*	mg/L	10	2/27/2018 6:54:11 PM	36678
Manganese	2.5	0.0055	0.010	*	mg/L	5	2/27/2018 6:52:05 PM	36678
Silver	0.0026	0.0012	0.0050	J	mg/L	1	2/27/2018 9:15:40 PM	36678
Zinc	0.0078	0.0033	0.010	J	mg/L	1	3/1/2018 4:45:14 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 8:30:42 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:14:13 AM	C49231
Selenium	ND	0.0038	0.0050		mg/L	5	2/21/2018 8:30:42 PM	B49298
Uranium	0.0025	0.000096	0.00050		mg/L	1	2/20/2018 12:14:13 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0025	0.00041	0.0010		mg/L	1	2/27/2018 1:09:34 PM	36678
Lead	0.0039	0.00023	0.00050		mg/L	1	2/27/2018 1:09:34 PM	36678
Selenium	0.0021	0.00098	0.0010		mg/L	1	3/6/2018 4:19:46 PM	36810
Uranium	0.0026	0.000068	0.00050		mg/L	1	2/27/2018 1:09:34 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000093	0.000037	0.00020	J	mg/L	1	2/23/2018 12:17:05 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Aniline	ND	3.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Benzoic acid	17	3.9	20	J	µg/L	1	2/28/2018 7:18:20 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 7:18:20 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 7:18:20 PM	36488
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 7:18:20 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 7:18:20 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Fluorene	5.0	4.0	10	J	µg/L	1	2/28/2018 7:18:20 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 7:18:20 PM	36488
1-Methylnaphthalene	53	3.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 7:18:20 PM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Naphthalene	18	2.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 7:18:20 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 7:18:20 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 7:18:20 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Phenol	24	3.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 7:18:20 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 7:18:20 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 7:18:20 PM	36488
Surr: 2-Fluorophenol	60.3	0	15-114		%Rec	1	2/28/2018 7:18:20 PM	36488
Surr: Phenol-d5	49.2	0	15-97.9		%Rec	1	2/28/2018 7:18:20 PM	36488
Surr: 2,4,6-Tribromophenol	86.4	0	15-161		%Rec	1	2/28/2018 7:18:20 PM	36488
Surr: Nitrobenzene-d5	80.6	0	29.3-120		%Rec	1	2/28/2018 7:18:20 PM	36488
Surr: 2-Fluorobiphenyl	80.9	0	17.5-116		%Rec	1	2/28/2018 7:18:20 PM	36488
Surr: 4-Terphenyl-d14	69.9	0	21-92.2		%Rec	1	2/28/2018 7:18:20 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2300	6.2	100		µg/L	100	2/13/2018 3:41:00 PM	R49114
Toluene	9.3	0.64	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
Ethylbenzene	140	0.93	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Methyl tert-butyl ether (MTBE)	5700	24	100		µg/L	100	2/13/2018 3:41:00 PM	R49114
1,2,4-Trimethylbenzene	5.6	1.1	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
1,3,5-Trimethylbenzene	1.1	0.87	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Naphthalene	19	1.1	20	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
1-Methylnaphthalene	46	1.6	40		µg/L	10	2/13/2018 4:05:00 PM	R49114
2-Methylnaphthalene	5.8	1.5	40	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
Acetone	ND	8.2	100		µg/L	10	2/13/2018 4:05:00 PM	R49114
Bromobenzene	ND	1.4	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Bromodichloromethane	ND	1.8	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Bromoform	ND	2.1	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Bromomethane	ND	2.6	30		µg/L	10	2/13/2018 4:05:00 PM	R49114
2-Butanone	ND	11	100		µg/L	10	2/13/2018 4:05:00 PM	R49114
Carbon disulfide	ND	4.0	100		µg/L	10	2/13/2018 4:05:00 PM	R49114
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Chlorobenzene	ND	1.1	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Chloroethane	ND	2.3	20		µg/L	10	2/13/2018 4:05:00 PM	R49114
Chloroform	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Chloromethane	ND	2.9	30		µg/L	10	2/13/2018 4:05:00 PM	R49114
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
cis-1,2-DCE	7.8	2.0	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/13/2018 4:05:00 PM	R49114
Dibromochloromethane	ND	0.72	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Dibromomethane	ND	0.91	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2-Dichlorobenzene	0.94	0.90	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1-Dichloroethane	ND	4.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1-Dichloroethene	6.8	0.81	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
2-Hexanone	ND	6.6	100		µg/L	10	2/13/2018 4:05:00 PM	R49114
Isopropylbenzene	7.0	0.51	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
4-Isopropyltoluene	2.5	0.96	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/13/2018 4:05:00 PM	R49114
Methylene Chloride	ND	1.1	30		µg/L	10	2/13/2018 4:05:00 PM	R49114
n-Butylbenzene	8.1	1.3	30	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
n-Propylbenzene	14	0.74	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
sec-Butylbenzene	4.0	1.1	10	J	µg/L	10	2/13/2018 4:05:00 PM	R49114
Styrene	ND	1.6	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/13/2018 4:05:00 PM	R49114
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/13/2018 4:05:00 PM	R49114
Vinyl chloride	ND	1.8	10		µg/L	10	2/13/2018 4:05:00 PM	R49114
Xylenes, Total	18	3.2	15		µg/L	10	2/13/2018 4:05:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	81.9	0	70-130		%Rec	10	2/13/2018 4:05:00 PM	R49114
Surr: 4-Bromofluorobenzene	78.0	0	70-130		%Rec	10	2/13/2018 4:05:00 PM	R49114
Surr: Dibromofluoromethane	85.1	0	70-130		%Rec	10	2/13/2018 4:05:00 PM	R49114
Surr: Toluene-d8	85.7	0	70-130		%Rec	10	2/13/2018 4:05:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 11:15:00 AM
Lab ID: 1802641-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	10	0.097	0.50		mg/L	10	2/12/2018 5:12:32 PM	R49065
Surr: BFB	110	0	70-130		%Rec	10	2/12/2018 5:12:32 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.2	0.63	1.0		mg/L	1	2/13/2018 2:39:36 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 2:39:36 PM	36465
Surr: DNOP	122	0	77.5-161		%Rec	1	2/13/2018 2:39:36 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/27/2018 3:07:20 PM	R49437
Chloride	740	12	25		mg/L	50	3/1/2018 8:56:20 PM	R49508
Bromide	1.0	0.073	0.50		mg/L	5	2/27/2018 3:07:20 PM	R49437
Phosphorus, Orthophosphate (As P)	3.4	1.2	2.5	H	mg/L	5	2/27/2018 3:07:20 PM	R49437
Sulfate	1.5	0.48	2.5	J	mg/L	5	2/27/2018 3:07:20 PM	R49437
Nitrate+Nitrite as N	0.21	0.13	1.0	J	mg/L	5	2/27/2018 6:50:40 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.4	0.0049	0.010	*	mg/L	5	2/14/2018 6:22:23 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:25:04 PM	A49128
Calcium	140	0.39	5.0		mg/L	5	2/14/2018 6:22:23 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:25:04 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:25:04 PM	A49128
Iron	6.1	0.16	0.20	*	mg/L	10	2/14/2018 6:24:15 PM	A49128
Magnesium	37	0.25	1.0		mg/L	1	2/14/2018 5:25:04 PM	A49128
Manganese	3.0	0.0020	0.010	*	mg/L	5	2/14/2018 6:22:23 PM	A49128
Potassium	0.92	0.11	1.0	J	mg/L	1	2/14/2018 5:25:04 PM	A49128
Silver	0.0032	0.0018	0.0050	J	mg/L	1	2/14/2018 5:25:04 PM	A49128
Sodium	660	1.6	10		mg/L	10	2/14/2018 6:24:15 PM	A49128
Zinc	0.0062	0.0021	0.010	J	mg/L	1	2/14/2018 5:25:04 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.6	0.0050	0.010	*	mg/L	5	2/27/2018 6:58:03 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:46:54 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:16:43 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:16:43 PM	36678
Iron	7.4	0.10	0.20	*	mg/L	10	2/27/2018 7:00:06 PM	36678
Manganese	3.0	0.0055	0.010	*	mg/L	5	2/27/2018 6:58:03 PM	36678
Silver	0.0030	0.0012	0.0050	J	mg/L	1	2/27/2018 9:17:33 PM	36678
Zinc	0.0043	0.0033	0.010	J	mg/L	1	3/1/2018 4:46:54 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.012	0.0021	0.0050	*	mg/L	5	2/21/2018 8:35:37 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:19:07 AM	C49231
Selenium	0.0045	0.0038	0.0050	J	mg/L	5	2/21/2018 8:35:37 PM	B49298
Uranium	0.0042	0.000096	0.00050		mg/L	1	2/20/2018 12:19:07 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	2/27/2018 1:14:28 PM	36678
Lead	0.00066	0.00023	0.00050		mg/L	1	2/27/2018 1:14:28 PM	36678
Selenium	0.0039	0.00098	0.0010		mg/L	1	3/6/2018 4:24:42 PM	36810
Uranium	0.0047	0.000068	0.00050		mg/L	1	2/27/2018 1:14:28 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000071	0.000037	0.00020	J	mg/L	1	2/23/2018 12:19:01 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Aniline	20	3.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzoic acid	ND	3.9	20		µg/L	1	2/28/2018 7:45:38 PM	36488
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 7:45:38 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 7:45:38 PM	36488
2,4-Dimethylphenol	54	2.8	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 7:45:38 PM	36488
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 7:45:38 PM	36488
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 7:45:38 PM	36488
1-Methylnaphthalene	17	3.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Methylnaphthalene	12	3.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Methylphenol	200	3.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
3+4-Methylphenol	260	32	100		µg/L	10	3/2/2018 11:09:12 AM	36488
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Naphthalene	54	2.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 7:45:38 PM	36488
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 7:45:38 PM	36488
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 7:45:38 PM	36488
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Phenol	80	3.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 7:45:38 PM	36488
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 7:45:38 PM	36488

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 7:45:38 PM	36488
Surr: 2-Fluorophenol	42.3	0	15-114		%Rec	1	2/28/2018 7:45:38 PM	36488
Surr: Phenol-d5	41.4	0	15-97.9		%Rec	1	2/28/2018 7:45:38 PM	36488
Surr: 2,4,6-Tribromophenol	77.9	0	15-161		%Rec	1	2/28/2018 7:45:38 PM	36488
Surr: Nitrobenzene-d5	72.3	0	29.3-120		%Rec	1	2/28/2018 7:45:38 PM	36488
Surr: 2-Fluorobiphenyl	75.3	0	17.5-116		%Rec	1	2/28/2018 7:45:38 PM	36488
Surr: 4-Terphenyl-d14	63.0	0	21-92.2		%Rec	1	2/28/2018 7:45:38 PM	36488
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	13000	12	200		µg/L	200	2/13/2018 4:29:00 PM	R49114
Toluene	12000	13	200		µg/L	200	2/13/2018 4:29:00 PM	R49114
Ethylbenzene	1000	1.9	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Methyl tert-butyl ether (MTBE)	59	4.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2,4-Trimethylbenzene	370	2.3	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,3,5-Trimethylbenzene	68	1.7	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Naphthalene	74	2.3	40		µg/L	20	2/13/2018 4:53:00 PM	R49114
1-Methylnaphthalene	18	3.2	80	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
2-Methylnaphthalene	18	3.0	80	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Acetone	110	16	200	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Bromobenzene	ND	2.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Bromodichloromethane	ND	3.5	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Bromoform	ND	4.2	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Bromomethane	ND	5.1	60		µg/L	20	2/13/2018 4:53:00 PM	R49114
2-Butanone	150	23	200	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Carbon disulfide	ND	8.0	200		µg/L	20	2/13/2018 4:53:00 PM	R49114
Carbon Tetrachloride	ND	2.2	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Chlorobenzene	ND	2.1	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Chloroethane	23	4.7	40	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Chloroform	ND	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Chloromethane	ND	5.9	60		µg/L	20	2/13/2018 4:53:00 PM	R49114
2-Chlorotoluene	ND	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
4-Chlorotoluene	ND	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
cis-1,2-DCE	ND	4.1	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	2/13/2018 4:53:00 PM	R49114
Dibromochloromethane	ND	1.4	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Dibromomethane	ND	1.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Dichlorodifluoromethane	ND	20	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1-Dichloroethane	31	8.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1-Dichloroethene	ND	1.6	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2-Dichloropropane	ND	2.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,3-Dichloropropane	ND	3.3	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
2,2-Dichloropropane	ND	3.1	40		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1-Dichloropropene	ND	1.9	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Hexachlorobutadiene	ND	16	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
2-Hexanone	ND	13	200		µg/L	20	2/13/2018 4:53:00 PM	R49114
Isopropylbenzene	29	1.0	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
4-Isopropyltoluene	4.6	1.9	20	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
4-Methyl-2-pentanone	33	14	200	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Methylene Chloride	ND	2.2	60		µg/L	20	2/13/2018 4:53:00 PM	R49114
n-Butylbenzene	9.4	2.6	60	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
n-Propylbenzene	70	1.5	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
sec-Butylbenzene	9.7	2.2	20	J	µg/L	20	2/13/2018 4:53:00 PM	R49114
Styrene	ND	3.1	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
tert-Butylbenzene	ND	2.1	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	2/13/2018 4:53:00 PM	R49114
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
trans-1,2-DCE	ND	3.7	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Trichlorofluoromethane	ND	3.7	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	2/13/2018 4:53:00 PM	R49114
Vinyl chloride	25	3.6	20		µg/L	20	2/13/2018 4:53:00 PM	R49114
Xylenes, Total	3100	6.4	30		µg/L	20	2/13/2018 4:53:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	82.3	0	70-130		%Rec	20	2/13/2018 4:53:00 PM	R49114
Surr: 4-Bromofluorobenzene	78.3	0	70-130		%Rec	20	2/13/2018 4:53:00 PM	R49114
Surr: Dibromofluoromethane	86.5	0	70-130		%Rec	20	2/13/2018 4:53:00 PM	R49114
Surr: Toluene-d8	87.0	0	70-130		%Rec	20	2/13/2018 4:53:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 2:55:00 PM
Lab ID: 1802641-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	69	0.48	2.5		mg/L	50	2/12/2018 5:35:30 PM	R49065
Surr: BFB	105	0	70-130		%Rec	50	2/12/2018 5:35:30 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	17	0.63	1.0		mg/L	1	2/13/2018 3:01:47 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 3:01:47 PM	36465
Surr: DNOP	126	0	77.5-161		%Rec	1	2/13/2018 3:01:47 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/27/2018 3:56:58 PM	R49437
Chloride	3200	50	100		mg/L	200	2/27/2018 4:09:23 PM	R49437
Bromide	1.9	0.073	0.50		mg/L	5	2/27/2018 3:56:58 PM	R49437
Phosphorus, Orthophosphate (As P)	4.3	1.2	2.5	H	mg/L	5	2/27/2018 3:56:58 PM	R49437
Sulfate	ND	0.48	2.5		mg/L	5	2/27/2018 3:56:58 PM	R49437
Nitrate+Nitrite as N	1.0	0.26	2.0	J	mg/L	10	2/27/2018 7:03:05 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	25	0.049	0.10	*	mg/L	50	2/14/2018 6:36:12 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:26:59 PM	A49128
Calcium	360	0.39	5.0		mg/L	5	2/14/2018 6:26:17 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:26:59 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:26:59 PM	A49128
Iron	22	0.82	1.0	*	mg/L	50	2/14/2018 6:36:12 PM	A49128
Magnesium	120	1.2	5.0		mg/L	5	2/14/2018 6:26:17 PM	A49128
Manganese	4.2	0.0020	0.010	*	mg/L	5	2/14/2018 6:26:17 PM	A49128
Potassium	6.8	0.11	1.0		mg/L	1	2/14/2018 5:26:59 PM	A49128
Silver	0.0083	0.0018	0.0050		mg/L	1	2/14/2018 5:26:59 PM	A49128
Sodium	1500	8.2	50		mg/L	50	2/14/2018 6:36:12 PM	A49128
Zinc	0.0055	0.0021	0.010	J	mg/L	1	2/14/2018 5:26:59 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	26	0.050	0.10	*	mg/L	50	2/27/2018 7:13:55 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:54:34 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:18:26 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:18:26 PM	36678
Iron	24	0.51	1.0	*	mg/L	50	2/27/2018 7:13:55 PM	36678
Manganese	4.2	0.0055	0.010	*	mg/L	5	2/27/2018 7:11:53 PM	36678
Silver	0.0066	0.0012	0.0050		mg/L	1	2/27/2018 9:19:26 PM	36678
Zinc	0.0034	0.0033	0.010	J	mg/L	1	3/1/2018 4:54:34 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0061	0.0042	0.010	J	mg/L	10	2/21/2018 8:40:32 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:24:02 AM	C49231
Selenium	0.0094	0.0076	0.010	J	mg/L	10	2/21/2018 8:40:32 PM	B49298
Uranium	ND	0.000096	0.00050		mg/L	1	2/20/2018 12:24:02 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0027	0.0021	0.0050	J	mg/L	5	2/28/2018 5:51:23 PM	36678
Lead	0.0047	0.0011	0.0025		mg/L	5	2/28/2018 5:51:23 PM	36678
Selenium	0.011	0.0049	0.0050		mg/L	5	3/6/2018 4:29:37 PM	36810
Uranium	0.00035	0.00034	0.0025	J	mg/L	5	2/28/2018 5:51:23 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000037	0.00020	J	mg/L	1	2/23/2018 12:20:56 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Aniline	ND	3.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Benzoic acid	15	3.9	20	J	µg/L	1	2/28/2018 9:07:25 PM	36490
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Carbazole	6.8	4.6	10	J	µg/L	1	2/28/2018 9:07:25 PM	36490
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 9:07:25 PM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 9:07:25 PM	36490
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 9:07:25 PM	36490
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 9:07:25 PM	36490
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Fluorene	7.7	4.0	10	J	µg/L	1	2/28/2018 9:07:25 PM	36490
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 9:07:25 PM	36490
1-Methylnaphthalene	81	3.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Methylnaphthalene	34	3.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 9:07:25 PM	36490
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Naphthalene	38	2.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 9:07:25 PM	36490
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 9:07:25 PM	36490
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 9:07:25 PM	36490
Phenanthrene	6.4	4.3	10	J	µg/L	1	2/28/2018 9:07:25 PM	36490
Phenol	ND	3.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 9:07:25 PM	36490
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 9:07:25 PM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 9:07:25 PM	36490
Surr: 2-Fluorophenol	34.2	0	15-114		%Rec	1	2/28/2018 9:07:25 PM	36490
Surr: Phenol-d5	28.7	0	15-97.9		%Rec	1	2/28/2018 9:07:25 PM	36490
Surr: 2,4,6-Tribromophenol	51.6	0	15-161		%Rec	1	2/28/2018 9:07:25 PM	36490
Surr: Nitrobenzene-d5	47.7	0	29.3-120		%Rec	1	2/28/2018 9:07:25 PM	36490
Surr: 2-Fluorobiphenyl	47.0	0	17.5-116		%Rec	1	2/28/2018 9:07:25 PM	36490
Surr: 4-Terphenyl-d14	47.5	0	21-92.2		%Rec	1	2/28/2018 9:07:25 PM	36490
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	13	0.31	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Toluene	2.4	0.32	5.0	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
Ethylbenzene	48	0.47	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2,4-Trimethylbenzene	8.6	0.56	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.44	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.65	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Naphthalene	90	0.57	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1-Methylnaphthalene	170	0.80	20	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
2-Methylnaphthalene	70	0.76	20	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Acetone	ND	4.1	50	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Bromobenzene	ND	0.70	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Bromodichloromethane	ND	0.88	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Bromoform	ND	1.1	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Bromomethane	ND	1.3	15	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
2-Butanone	ND	5.7	50	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Carbon disulfide	ND	2.0	50	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Carbon Tetrachloride	ND	0.55	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Chlorobenzene	ND	0.53	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Chloroethane	ND	1.2	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Chloroform	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Chloromethane	ND	1.5	15	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
2-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
4-Chlorotoluene	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
cis-1,2-DCE	ND	1.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.41	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	6.9	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Dibromochloromethane	ND	0.36	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Dibromomethane	ND	0.45	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2-Dichlorobenzene	0.56	0.45	5.0	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.76	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,4-Dichlorobenzene	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Dichlorodifluoromethane	ND	5.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1-Dichloroethane	ND	2.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1-Dichloroethene	ND	0.40	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2-Dichloropropane	ND	0.51	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,3-Dichloropropane	ND	0.84	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
2,2-Dichloropropane	ND	0.79	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1-Dichloropropene	ND	0.46	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Hexachlorobutadiene	ND	4.0	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
2-Hexanone	ND	3.3	50	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Isopropylbenzene	21	0.26	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
4-Isopropyltoluene	2.2	0.48	5.0	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
4-Methyl-2-pentanone	ND	3.5	50	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Methylene Chloride	ND	0.54	15	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
n-Butylbenzene	7.6	0.65	15	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
n-Propylbenzene	27	0.37	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
sec-Butylbenzene	14	0.55	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Styrene	ND	0.78	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
tert-Butylbenzene	0.67	0.52	5.0	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.52	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.68	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.65	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
trans-1,2-DCE	ND	0.92	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
trans-1,3-Dichloropropene	ND	1.1	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.59	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.71	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1,1-Trichloroethane	ND	0.36	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,1,2-Trichloroethane	ND	0.70	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Trichloroethene (TCE)	ND	0.56	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Trichlorofluoromethane	ND	0.91	5.0	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
1,2,3-Trichloropropane	ND	1.9	10	D	µg/L	5	2/13/2018 5:17:00 PM	R49114
Vinyl chloride	0.93	0.89	5.0	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
Xylenes, Total	2.1	1.6	7.5	JD	µg/L	5	2/13/2018 5:17:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	82.6	0	70-130	D	%Rec	5	2/13/2018 5:17:00 PM	R49114
Surr: 4-Bromofluorobenzene	78.9	0	70-130	D	%Rec	5	2/13/2018 5:17:00 PM	R49114
Surr: Dibromofluoromethane	87.0	0	70-130	D	%Rec	5	2/13/2018 5:17:00 PM	R49114
Surr: Toluene-d8	86.2	0	70-130	D	%Rec	5	2/13/2018 5:17:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018 4:15:00 PM
Lab ID: 1802641-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.70	0.019	0.10		mg/L	2	2/13/2018 10:21:19 AM	R49107
Surr: BFB	110	0	70-130		%Rec	2	2/13/2018 10:21:19 AM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 3:23:54 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 3:23:54 PM	36465
Surr: DNOP	130	0	77.5-161		%Rec	1	2/13/2018 3:23:54 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.25	0.22	0.50	J	mg/L	5	2/27/2018 4:21:48 PM	R49437
Chloride	96	5.0	10		mg/L	20	2/27/2018 4:34:12 PM	R49437
Bromide	0.53	0.073	0.50		mg/L	5	2/27/2018 4:21:48 PM	R49437
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/27/2018 4:21:48 PM	R49437
Sulfate	240	1.9	10		mg/L	20	2/27/2018 4:34:12 PM	R49437
Nitrate+Nitrite as N	0.19	0.13	1.0	J	mg/L	5	2/27/2018 7:15:29 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.041	0.00099	0.0020		mg/L	1	2/14/2018 5:29:04 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:29:04 PM	A49128
Calcium	76	0.078	1.0		mg/L	1	2/14/2018 5:29:04 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:29:04 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:29:04 PM	A49128
Iron	ND	0.016	0.020		mg/L	1	2/14/2018 5:29:04 PM	A49128
Magnesium	16	0.25	1.0		mg/L	1	2/14/2018 5:29:04 PM	A49128
Manganese	0.26	0.00039	0.0020	*	mg/L	1	2/14/2018 5:29:04 PM	A49128
Potassium	0.93	0.11	1.0	J	mg/L	1	2/14/2018 5:29:04 PM	A49128
Silver	0.0020	0.0018	0.0050	J	mg/L	1	2/14/2018 5:29:04 PM	A49128
Sodium	270	0.82	5.0		mg/L	5	2/14/2018 6:38:05 PM	A49128
Zinc	0.0064	0.0021	0.010	J	mg/L	1	2/14/2018 5:29:04 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.12	0.0010	0.0020		mg/L	1	2/23/2018 9:29:22 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:56:16 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:29:22 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:29:22 PM	36678
Iron	2.8	0.051	0.10	*	mg/L	5	2/27/2018 9:23:16 PM	36678
Manganese	0.33	0.0011	0.0020	*	mg/L	1	2/23/2018 9:29:22 PM	36678
Silver	0.0018	0.0012	0.0050	J	mg/L	1	2/27/2018 9:21:23 PM	36678
Zinc	0.0077	0.0033	0.010	J	mg/L	1	3/1/2018 4:56:16 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/21/2018 8:45:26 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:28:56 AM	C49231
Selenium	ND	0.0038	0.0050		mg/L	5	2/21/2018 8:45:26 PM	B49298
Uranium	0.035	0.00048	0.0025	*	mg/L	5	2/21/2018 8:45:26 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	2/27/2018 1:34:09 PM	36678
Lead	0.0026	0.00023	0.00050		mg/L	1	2/27/2018 1:34:09 PM	36678
Selenium	0.0018	0.00098	0.0010		mg/L	1	3/6/2018 4:34:32 PM	36810
Uranium	0.035	0.00034	0.0025	*	mg/L	5	2/28/2018 6:06:06 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000037	0.00020	J	mg/L	1	2/23/2018 12:22:53 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Acenaphthylene	ND	3.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Aniline	ND	3.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Anthracene	ND	3.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Azobenzene	ND	4.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benz(a)anthracene	ND	3.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benzo(a)pyrene	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Benzoic acid	11	3.9	20	J	µg/L	1	2/28/2018 9:35:12 PM	36490
Benzyl alcohol	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Bis(2-ethylhexyl)phthalate	17	4.8	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Carbazole	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Chloroaniline	ND	3.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Chloronaphthalene	ND	3.7	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Chlorophenol	ND	7.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Chrysene	ND	3.8	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Dibenzofuran	ND	4.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	2/28/2018 9:35:12 PM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Diethyl phthalate	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Dimethyl phthalate	ND	3.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	2/28/2018 9:35:12 PM	36490
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	2/28/2018 9:35:12 PM	36490
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	2/28/2018 9:35:12 PM	36490
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Fluoranthene	ND	4.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Fluorene	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Hexachlorobenzene	ND	3.8	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Hexachlorobutadiene	ND	1.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Hexachloroethane	ND	1.2	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Isophorone	ND	4.4	10		µg/L	1	2/28/2018 9:35:12 PM	36490
1-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Methylnaphthalene	ND	3.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Methylphenol	ND	3.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
3+4-Methylphenol	ND	3.2	10		µg/L	1	2/28/2018 9:35:12 PM	36490
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Naphthalene	ND	2.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Nitroaniline	ND	4.9	10		µg/L	1	2/28/2018 9:35:12 PM	36490
3-Nitroaniline	ND	4.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Nitroaniline	ND	4.0	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Nitrobenzene	ND	3.6	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2-Nitrophenol	ND	5.2	10		µg/L	1	2/28/2018 9:35:12 PM	36490
4-Nitrophenol	ND	5.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Pentachlorophenol	ND	4.9	20		µg/L	1	2/28/2018 9:35:12 PM	36490
Phenanthrene	ND	4.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Phenol	ND	3.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Pyrene	ND	4.4	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Pyridine	ND	2.3	10		µg/L	1	2/28/2018 9:35:12 PM	36490
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	2/28/2018 9:35:12 PM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	2/28/2018 9:35:12 PM	36490
Surr: 2-Fluorophenol	47.8	0	15-114		%Rec	1	2/28/2018 9:35:12 PM	36490
Surr: Phenol-d5	36.7	0	15-97.9		%Rec	1	2/28/2018 9:35:12 PM	36490
Surr: 2,4,6-Tribromophenol	78.0	0	15-161		%Rec	1	2/28/2018 9:35:12 PM	36490
Surr: Nitrobenzene-d5	71.8	0	29.3-120		%Rec	1	2/28/2018 9:35:12 PM	36490
Surr: 2-Fluorobiphenyl	73.0	0	17.5-116		%Rec	1	2/28/2018 9:35:12 PM	36490
Surr: 4-Terphenyl-d14	57.8	0	21-92.2		%Rec	1	2/28/2018 9:35:12 PM	36490
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Toluene	0.16	0.064	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
Ethylbenzene	0.14	0.093	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
Methyl tert-butyl ether (MTBE)	390	2.4	10		µg/L	10	2/13/2018 5:41:00 PM	R49114
1,2,4-Trimethylbenzene	0.61	0.11	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
1,3,5-Trimethylbenzene	0.24	0.087	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1-Methylnaphthalene	0.70	0.16	4.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
2-Methylnaphthalene	0.67	0.15	4.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 6:04:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 6:04:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 6:04:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 6:04:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 6:04:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
n-Propylbenzene	0.10	0.074	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
sec-Butylbenzene	0.15	0.11	1.0	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 6:04:00 PM	R49114
Xylenes, Total	0.80	0.32	1.5	J	µg/L	1	2/13/2018 6:04:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	80.0	0	70-130		%Rec	1	2/13/2018 6:04:00 PM	R49114
Surr: 4-Bromofluorobenzene	76.0	0	70-130		%Rec	1	2/13/2018 6:04:00 PM	R49114
Surr: Dibromofluoromethane	85.4	0	70-130		%Rec	1	2/13/2018 6:04:00 PM	R49114
Surr: Toluene-d8	85.0	0	70-130		%Rec	1	2/13/2018 6:04:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 04
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/8/2018
Lab ID: 1802641-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.26	0.0097	0.050		mg/L	1	2/12/2018 6:21:25 PM	R49065
Surr: BFB	105	0	70-130		%Rec	1	2/12/2018 6:21:25 PM	R49065

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802641-007
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 6:29:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 6:29:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 6:29:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802641-007
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 6:29:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 6:29:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 6:29:00 PM	R49114
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 6:29:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	82.0	0	70-130		%Rec	1	2/13/2018 6:29:00 PM	R49114
Surr: 4-Bromofluorobenzene	76.7	0	70-130		%Rec	1	2/13/2018 6:29:00 PM	R49114
Surr: Dibromofluoromethane	87.0	0	70-130		%Rec	1	2/13/2018 6:29:00 PM	R49114
Surr: Toluene-d8	84.5	0	70-130		%Rec	1	2/13/2018 6:29:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.44	1.0	0.5000	0	88.4	50	150			J
Chromium	0.0059	0.0060	0.006000	0	98.2	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.5	50	150			J
Potassium	0.51	1.0	0.5000	0	101	50	150			J
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Sodium	0.45	1.0	0.5000	0	89.1	50	150			J
Zinc	0.0041	0.010	0.005000	0	81.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Calcium	46	1.0	50.00	0	92.0	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	47	1.0	50.00	0	94.6	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Potassium	46	1.0	50.00	0	92.0	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Sodium	46	1.0	50.00	0	92.8	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	**LLLCS-36678**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594024** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.5	50	150			J
Copper	0.0045	0.0060	0.006000	0	75.5	50	150			J
Iron	0.018	0.020	0.02000	0	90.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID	**LCS-36678**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Zinc	0.48	0.010	0.5000	0	95.9	85	115			

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49490**
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1599519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.00067	0.0020								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**LLLCS-36678**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**36678**		RunNo:	**49490**				
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**		SeqNo:	**1599520**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			

Sample ID	**LCS-36678**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**36678**		RunNo:	**49490**				
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**		SeqNo:	**1599521**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588407** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00073	0.0010	0.001000	0	73.0	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.7	85	115			
Lead	0.012	0.00050	0.01250	0	94.4	85	115			
Uranium	0.012	0.00050	0.01250	0	99.1	85	115			

Sample ID **1802641-001GMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-44**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588418** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0010	0.02500	0.007470	93.4	70	130			
Lead	0.013	0.00050	0.01250	0	101	70	130			

Sample ID **1802641-001GMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-44**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0010	0.02500	0.007470	94.1	70	130	0.552	20	
Lead	0.013	0.00050	0.01250	0	101	70	130	0.103	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.1	50	150			J
Selenium	0.00090	0.0010	0.001000	0	90.5	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591421** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Selenium	0.023	0.0010	0.02500	0	91.0	85	115			
Uranium	0.012	0.00050	0.01250	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595142**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36678**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595143**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.4	50	150			J

Sample ID	**MSLCS-36678**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595144**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID	**MB-36810**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602819**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36810**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602820**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00091	0.0010	0.001000	0	90.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MSLCS-36810**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602821**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	93.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-36669**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **36669**			RunNo: **49349**					
Prep Date:	**2/22/2018**	Analysis Date: **2/23/2018**			SeqNo: **1593113**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000077	0.00020								J

Sample ID	**LCS-36669**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **36669**			RunNo: **49349**					
Prep Date:	**2/22/2018**	Analysis Date: **2/23/2018**			SeqNo: **1593116**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Sample ID	**1802641-001FMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**MKTF-44**	Batch ID: **36669**			RunNo: **49349**					
Prep Date:	**2/22/2018**	Analysis Date: **2/23/2018**			SeqNo: **1593118**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	.00007904	94.9	75	125			

Sample ID	**1802641-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**MKTF-44**	Batch ID: **36669**			RunNo: **49349**					
Prep Date:	**2/22/2018**	Analysis Date: **2/23/2018**			SeqNo: **1593119**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00007904	97.2	75	125	2.34	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49284**	RunNo: **49284**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1590426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49284**	RunNo: **49284**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1590427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.3	90	110			
Chloride	4.8	0.50	5.000	0	96.9	90	110			
Bromide	2.5	0.10	2.500	0	98.9	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.5	90	110			
Sulfate	9.6	0.50	10.00	0	96.3	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49437**	RunNo: **49437**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.17	0.50								J
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49437**	RunNo: **49437**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	4.8	0.50	5.000	0	95.1	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	5.3	0.50	5.000	0	105	90	110			
Sulfate	9.5	0.50	10.00	0	95.0	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBW**	Batch ID:	**R49508**	RunNo:	**49508**					
Prep Date:		Analysis Date:	**3/1/2018**	SeqNo:	**1599773**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	**LCS**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSW**	Batch ID:	**R49508**	RunNo:	**49508**					
Prep Date:		Analysis Date:	**3/1/2018**	SeqNo:	**1599774**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-36465**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		120	77.5	161			

Sample ID **1802641-001CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-44**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	83.3	151			
Surr: DNOP	0.56		0.5000		112	77.5	161			

Sample ID **LCS-36465**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	113	92.3	135			
Surr: DNOP	0.56		0.5000		111	77.5	161			

Sample ID **1802641-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-44**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580841** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	117	83.3	151	4.46	20	
Surr: DNOP	0.56		0.5000		112	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.5	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.9	70	130			
Surr: Toluene-d8	8.4		10.00		84.2	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	7.7		10.00		77.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.4		10.00		84.3	70	130			

Sample ID **1802641-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581437** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		78.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		86.0	70	130			
Surr: Toluene-d8	8.4		10.00		83.9	70	130			

Sample ID **1802641-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130	0.491	20	
Toluene	20	1.0	20.00	0	101	70	130	1.87	20	
Chlorobenzene	21	1.0	20.00	0	105	70	130	0.743	20	
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130	2.40	20	
Trichloroethene (TCE)	20	1.0	20.00	0	98.7	70	130	1.29	20	
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	7.7		10.00		77.0	70	130	0	0	
Surr: Dibromofluoromethane	8.9		10.00		89.1	70	130	0	0	
Surr: Toluene-d8	8.5		10.00		84.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **lcs-36490**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597595** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	94	10	100.0	0	93.9	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	83.4	40.5	108			
2-Chlorophenol	170	10	200.0	0	83.3	35	103			
1,4-Dichlorobenzene	78	10	100.0	0	78.2	24.7	93.7			
2,4-Dinitrotoluene	85	10	100.0	0	84.7	35.6	91.4			
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.5	41.6	114			
4-Nitrophenol	140	10	200.0	0	68.4	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.2	25.3	98.5			
Phenol	110	10	200.0	0	56.7	20.9	75.1			
Pyrene	88	10	100.0	0	88.2	45.6	108			
1,2,4-Trichlorobenzene	92	10	100.0	0	91.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		63.8	15	114			
Surr: Phenol-d5	120		200.0		60.6	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		92.7	15	161			
Surr: Nitrobenzene-d5	89		100.0		89.5	29.3	120			
Surr: 2-Fluorobiphenyl	94		100.0		93.5	17.5	116			
Surr: 4-Terphenyl-d14	62		100.0		61.8	21	92.2			

Sample ID **LCS-36488**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	82	10	100.0	0	82.1	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	87.2	40.5	108			
2-Chlorophenol	180	10	200.0	0	90.2	35	103			
1,4-Dichlorobenzene	75	10	100.0	0	74.9	24.7	93.7			
2,4-Dinitrotoluene	81	10	100.0	0	81.2	35.6	91.4			
N-Nitrosodi-n-propylamine	92	10	100.0	0	92.3	41.6	114			
4-Nitrophenol	130	10	200.0	0	62.7	20.7	74.3			
Pentachlorophenol	140	20	200.0	0	71.3	25.3	98.5			
Phenol	140	10	200.0	0	68.1	20.9	75.1			
Pyrene	82	10	100.0	0	82.1	45.6	108			
1,2,4-Trichlorobenzene	80	10	100.0	0	80.4	30.3	106			
Surr: 2-Fluorophenol	150		200.0		76.7	15	114			
Surr: Phenol-d5	130		200.0		66.4	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		82.6	15	161			
Surr: Nitrobenzene-d5	87		100.0		86.5	29.3	120			
Surr: 2-Fluorobiphenyl	80		100.0		80.1	17.5	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **LCS-36488**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597596** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	56		100.0		55.8	21	92.2			

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.9	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	74		200.0		36.9	15	114			
Surr: Phenol-d5	66		200.0		32.8	15	97.9			
Surr: 2,4,6-Tribromophenol	140		200.0		70.1	15	161			
Surr: Nitrobenzene-d5	60		100.0		59.5	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.5	17.5	116			
Surr: 4-Terphenyl-d14	47		100.0		47.3	21	92.2			

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-36488**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36488**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		53.2	15	114			
Surr: Phenol-d5	81		200.0		40.3	15	97.9			
Surr: 2,4,6-Tribromophenol	120		200.0		59.8	15	161			
Surr: Nitrobenzene-d5	69		100.0		68.9	29.3	120			
Surr: 2-Fluorobiphenyl	58		100.0		58.2	17.5	116			
Surr: 4-Terphenyl-d14	38		100.0		37.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802641**

08-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.9	70	130			
Surr: BFB	10		10.00		102	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R49065**	RunNo: **49065**
Prep Date:	Analysis Date: **2/12/2018**	SeqNo: **1579388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		113	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581231** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.7	70	130			
Surr: BFB	11		10.00		106	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1802641 RcptNo: 1

Received By: **Sophia Campuzano** 2/10/2018 9:10:00 AM

Completed By: **Anne Thorne** 2/12/2018 7:30:47 AM

Reviewed By: JMO 2/12/18

Labeled By DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 18 (2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? no
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: DDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

COOLER 1) 1.3-CF 0.5=0.8, COOLER 2) 1.3-CF 0.5=0.8 COOLER3) 1.4-CF 0.5=0.9 COOLER 4) 2.8-CF 0.5 = 2.3
CUSTODY SEALS INTACT ON COOLERS AND SAMPLE BOTTLES/at 2/12/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4		Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9 0.7(CF) = 1.2~~ 02/10/18 SRC 4 COOLERS

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802141	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/8/18	0920	WATER	MKTF-44	40 ML VOA-5	HCL	001			✓							✓						
				1 L AMBER-1	NEAT	001											✓					
				250 ML AMBER-1	NEAT	001			✓													
				250 ML PLASTIC-1	HNO_3	001												✓				
				125 ML PLASTIC-1	HNO_3	001												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	001													✓			
				125 ML PLASTIC-1	NEAT	001													✓			
	1025	WATER	MKTF-33	40 ML VOA-5	HCL	002			✓							✓						
				1 L AMBER-1	NEAT	002											✓					
				250 ML AMBER-1	NEAT	002			✓													
				250 ML PLASTIC-1	HNO_3	002												✓				
				125 ML PLASTIC-1	HNO_3	002												✓	✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/10/18	0910				

Date	Time	Relinquished by:	Received by:	Date	Time
				02/10/18	0910

Remarks: Coolers:
1) 1.3 - 0.5 (CF) = 0.8
2) 1.3 - 0.5 (CF) = 0.8
3) 1.4 - 0.5 (CF) = 0.9
4) 2.8 - 0.5 (CF) = 2.3 SRC 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Plse give AT folder

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☑ Yes ☐ No

Sample Temperature: ~~1.9 - 0.7(CF) = 1.2~~ 02/10/18 SRC

4 coolers

HEAL No. 1802641

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel: 505-345-3975 Fax: 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/8/18	1025	WATER	MKTF-33	125 ML PLASTIC-1	H_2SO_4													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT													✓			
	1115	WATER	MKTF-22	40 ML VOA-5	HCL			✓							✓						
				1 L AMBER-1	NEAT											✓					
				250 ML AMBER-1	NEAT			✓													
				250 ML PLASTIC-1	HNO_3												✓				
				125 ML PLASTIC-1	HNO_3												✓	✓			
				125 ML PLASTIC-1	H_2SO_4													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT													✓			
	1455	WATER	MKTF-11	40 ML VOA-5	HCL			✓							✓						
				1 L AMBER-1	NEAT											✓					
↓	↓	↓	↓	250 ML AMBER-1	NEAT			✓													

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/10/18	0910			02/10/18	0910
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Coolers;
1.) 1.3 - 0.5 (CF) = 0.8
2.) 1.3 - 0.5 (CF) = 0.8
3.) 1.4 - 0.5 (CF) = 0.9
4.) 2.8 - 0.5 (CF) = 2.3

SRC 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9 - 0.7(CF) = 1.2~~ SPK 02/10/18

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

4 coolers
HEAL No. 1802641

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/8/18	1455	WATER	MKTF-11	250 mL PLASTIC-1	HNO_3												✓				-004
				125 mL PLASTIC-1	HNO_3												✓	✓			-004
				125 mL PLASTIC-1	H_2SO_4													✓			-004
				125 mL PLASTIC-1	NEAT													✓			-004
	1615	WATER	MKTF-39	40 mL VOA-5	HCL			✓							✓						-005
				1 L AMBER-1	NEAT											✓					-005
				250 mL AMBER-1	NEAT			✓													-005
				250 mL PLASTIC-1	HNO_3												✓				-005
				125 mL PLASTIC-1	HNO_3												✓	✓			-005
				125 mL PLASTIC-1	H_2SO_4													✓			-005
				125 mL PLASTIC-1	NEAT													✓			-005

Date	Time	Relinquished by	Received by	Date	Time
2/10/18	0910			02/10/18	0910
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Coolers:
1.) 1.3 - 0.5(CF) = 0.8
2.) 1.3 - 0.5(CF) = 0.8
3.) 1.4 - 0.5(CF) = 0.9
4.) 2.8 - 0.5(CF) = 2.3 SPK 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA. L. O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9 0.7 (CF) 1.2~~ 02/10/18 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802641	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/8/18	—	WATER	DUP04	40 ML VOA-5	HCL	006			✓							✓						
				1 L AMBER-1	NEAT	006											✓					
				250 ML AMBER-1	NEAT	006			✓													
				250 ML PLASTIC-1	HNO_3	006												✓				
				125 ML PLASTIC-1	HNO_3	006												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	006													✓			
				125 ML PLASTIC-1	NEAT	006													✓			
↓	↓	↓	TRIP BLANK	40 ML VOA-3	HCL	007										✓						

Date: 2/10/18 Time: 0910 Relinquished by:
Received by: Date 02/10/18 Time 0910
Date: Time: Relinquished by:
Received by: Date Time

Remarks: Coolers:
1) 1.3 - 0.5(CF) = 0.8
2) 1.3 - 0.5(CF) = 0.8
3) 1.4 - 0.5(CF) = 0.9
4) 2.8 - 0.5(CF) = 2.3
SRC 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 15, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling (API) OrderNo.: 1802642

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/10/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP1-NW
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 1:55:00 PM
Lab ID: 1802642-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 3:46:14 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 3:46:14 PM	36465
Surr: DNOP	125	0	77.5-161		%Rec	1	2/13/2018 3:46:14 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/27/2018 10:59:10 AM	R49437
Chloride	2100	50	100		mg/L	200	3/1/2018 7:29:27 PM	R49508
Bromide	3.6	0.073	0.50		mg/L	5	2/27/2018 10:59:10 AM	R49437
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	2/27/2018 10:59:10 AM	R49437
Sulfate	150	0.48	2.5		mg/L	5	2/27/2018 10:59:10 AM	R49437
Nitrate+Nitrite as N	25	0.26	2.0	*	mg/L	10	3/1/2018 7:41:52 PM	R49508
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.12	0.00099	0.0020		mg/L	1	2/14/2018 5:31:04 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:31:04 PM	A49128
Calcium	80	0.078	1.0		mg/L	1	2/14/2018 5:31:04 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:31:04 PM	A49128
Copper	0.0043	0.0032	0.0060	J	mg/L	1	2/14/2018 5:31:04 PM	A49128
Iron	0.076	0.016	0.020		mg/L	1	2/14/2018 5:31:04 PM	A49128
Magnesium	11	0.25	1.0		mg/L	1	2/14/2018 5:31:04 PM	A49128
Manganese	0.0017	0.00039	0.0020	J	mg/L	1	2/14/2018 5:31:04 PM	A49128
Potassium	4.7	0.11	1.0		mg/L	1	2/14/2018 5:31:04 PM	A49128
Silver	0.0039	0.0018	0.0050	J	mg/L	1	2/14/2018 5:31:04 PM	A49128
Sodium	1400	8.2	50		mg/L	50	2/14/2018 6:40:04 PM	A49128
Zinc	0.0084	0.0021	0.010	J	mg/L	1	2/14/2018 5:31:04 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	2/23/2018 9:31:05 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:57:55 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:31:05 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:31:05 PM	36678
Iron	2.9	0.051	0.10	*	mg/L	5	2/27/2018 9:27:21 PM	36678
Manganese	0.056	0.0011	0.0020	*	mg/L	1	2/23/2018 9:31:05 PM	36678
Silver	0.0023	0.0012	0.0050	J	mg/L	1	2/27/2018 9:25:31 PM	36678
Zinc	0.046	0.0033	0.010		mg/L	1	3/1/2018 4:57:55 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0084	0.020		mg/L	20	3/1/2018 6:33:30 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:33:50 AM	C49231
Selenium	0.018	0.0038	0.0050		mg/L	5	2/21/2018 9:00:15 PM	B49298
Uranium	0.028	0.00048	0.0025		mg/L	5	2/21/2018 9:00:15 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP1-NW
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 1:55:00 PM
Lab ID: 1802642-001
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0041	0.010		mg/L	10	2/28/2018 6:15:57 PM	36678
Lead	0.0029	0.0011	0.0025		mg/L	5	2/28/2018 6:11:02 PM	36678
Selenium	0.019	0.0049	0.0050		mg/L	5	3/6/2018 4:39:27 PM	36810
Uranium	0.029	0.00034	0.0025		mg/L	5	2/28/2018 6:11:02 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000037	0.00020	J	mg/L	1	2/27/2018 4:06:59 PM	36669
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.52	0.062	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
Toluene	2.1	0.064	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Ethylbenzene	0.49	0.093	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2,4-Trimethylbenzene	0.51	0.11	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
1,3,5-Trimethylbenzene	0.22	0.087	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 6:53:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 6:53:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 6:53:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP1-NW
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 1:55:00 PM
Lab ID: 1802642-001 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 6:53:00 PM	R49114
Isopropylbenzene	0.14	0.051	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 6:53:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
n-Propylbenzene	0.15	0.074	1.0	J	µg/L	1	2/13/2018 6:53:00 PM	R49114
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 6:53:00 PM	R49114
Xylenes, Total	2.4	0.32	1.5		µg/L	1	2/13/2018 6:53:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	82.7	0	70-130		%Rec	1	2/13/2018 6:53:00 PM	R49114
Surr: 4-Bromofluorobenzene	77.3	0	70-130		%Rec	1	2/13/2018 6:53:00 PM	R49114
Surr: Dibromofluoromethane	86.7	0	70-130		%Rec	1	2/13/2018 6:53:00 PM	R49114
Surr: Toluene-d8	84.4	0	70-130		%Rec	1	2/13/2018 6:53:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP1-NW
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 1:55:00 PM
Lab ID: 1802642-001
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.045	0.0097	0.050	J	mg/L	1	2/13/2018 12:49:25 PM	R49107
Surr: BFB	113	0	70-130		%Rec	1	2/13/2018 12:49:25 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 2:50:00 PM
Lab ID: 1802642-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	2/13/2018 4:08:20 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 4:08:20 PM	36465
Surr: DNOP	125	0	77.5-161		%Rec	1	2/13/2018 4:08:20 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.5	0.22	0.50		mg/L	5	2/27/2018 11:23:59 AM	R49437
Chloride	250	5.0	10		mg/L	20	2/27/2018 11:36:24 AM	R49437
Bromide	1.2	0.073	0.50		mg/L	5	2/27/2018 11:23:59 AM	R49437
Phosphorus, Orthophosphate (As P)	1.8	1.2	2.5	JH	mg/L	5	2/27/2018 11:23:59 AM	R49437
Sulfate	6.0	0.48	2.5		mg/L	5	2/27/2018 11:23:59 AM	R49437
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/27/2018 7:40:18 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.0	0.0049	0.010		mg/L	5	2/14/2018 6:42:08 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:33:11 PM	A49128
Calcium	76	0.078	1.0		mg/L	1	2/14/2018 5:33:11 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:33:11 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:33:11 PM	A49128
Iron	1.6	0.082	0.10	*	mg/L	5	2/14/2018 6:42:08 PM	A49128
Magnesium	14	0.25	1.0		mg/L	1	2/14/2018 5:33:11 PM	A49128
Manganese	1.1	0.0020	0.010	*	mg/L	5	2/14/2018 6:42:08 PM	A49128
Potassium	0.33	0.11	1.0	J	mg/L	1	2/14/2018 5:33:11 PM	A49128
Silver	0.0021	0.0018	0.0050	J	mg/L	1	2/14/2018 5:33:11 PM	A49128
Sodium	330	0.82	5.0		mg/L	5	2/14/2018 6:42:08 PM	A49128
Zinc	0.0049	0.0021	0.010	J	mg/L	1	2/14/2018 5:33:11 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	2/27/2018 9:38:53 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 4:59:35 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:32:50 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:32:50 PM	36678
Iron	4.9	0.051	0.10	*	mg/L	5	2/27/2018 9:38:53 PM	36678
Manganese	0.99	0.0011	0.0020	*	mg/L	1	2/23/2018 9:32:50 PM	36678
Silver	0.0018	0.0012	0.0050	J	mg/L	1	2/27/2018 9:29:24 PM	36678
Zinc	0.0066	0.0033	0.010	J	mg/L	1	3/1/2018 4:59:35 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0047	0.0021	0.0050	J	mg/L	5	2/21/2018 9:05:09 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 12:38:45 AM	C49231
Selenium	0.0040	0.0038	0.0050	J	mg/L	5	2/21/2018 9:05:09 PM	B49298
Uranium	0.00029	0.000096	0.00050	J	mg/L	1	2/20/2018 12:38:45 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 2:50:00 PM
Lab ID: 1802642-002
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0056	0.00041	0.0010		mg/L	1	2/27/2018 1:43:59 PM	36678
Lead	0.0015	0.00023	0.00050		mg/L	1	2/27/2018 1:43:59 PM	36678
Selenium	0.0044	0.00098	0.0010		mg/L	1	3/6/2018 4:54:13 PM	36810
Uranium	0.00040	0.000068	0.00050	J	mg/L	1	2/27/2018 1:43:59 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000073	0.000037	0.00020	J	mg/L	1	2/23/2018 12:30:49 PM	36669
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	27	0.062	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Toluene	0.69	0.064	1.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
Ethylbenzene	33	0.093	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Methyl tert-butyl ether (MTBE)	130	0.24	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2,4-Trimethylbenzene	0.50	0.11	1.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
1,3,5-Trimethylbenzene	0.15	0.087	1.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Naphthalene	4.4	0.11	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1-Methylnaphthalene	5.5	0.16	4.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
2-Methylnaphthalene	1.4	0.15	4.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
Acetone	8.1	0.82	10	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 7:17:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 7:17:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 2:50:00 PM
Lab ID: 1802642-002 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 7:17:00 PM	R49114
Isopropylbenzene	3.3	0.051	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 7:17:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
n-Butylbenzene	0.58	0.13	3.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
n-Propylbenzene	3.0	0.074	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
sec-Butylbenzene	1.1	0.11	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
tert-Butylbenzene	0.32	0.10	1.0	J	µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 7:17:00 PM	R49114
Xylenes, Total	1.6	0.32	1.5		µg/L	1	2/13/2018 7:17:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	79.8	0	70-130		%Rec	1	2/13/2018 7:17:00 PM	R49114
Surr: 4-Bromofluorobenzene	78.3	0	70-130		%Rec	1	2/13/2018 7:17:00 PM	R49114
Surr: Dibromofluoromethane	85.1	0	70-130		%Rec	1	2/13/2018 7:17:00 PM	R49114
Surr: Toluene-d8	85.4	0	70-130		%Rec	1	2/13/2018 7:17:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 2:50:00 PM
Lab ID: 1802642-002 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.81	0.0097	0.050		mg/L	1	2/13/2018 1:12:18 PM	R49107
Surr: BFB	115	0	70-130		%Rec	1	2/13/2018 1:12:18 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 3:30:00 PM
Lab ID: 1802642-003 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 4:30:49 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 4:30:49 PM	36465
Surr: DNOP	128	0	77.5-161		%Rec	1	2/13/2018 4:30:49 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.80	0.22	0.50		mg/L	5	2/27/2018 11:48:49 AM	R49437
Chloride	190	5.0	10		mg/L	20	2/27/2018 12:01:13 PM	R49437
Bromide	1.5	0.073	0.50		mg/L	5	2/27/2018 11:48:49 AM	R49437
Phosphorus, Orthophosphate (As P)	2.1	1.2	2.5	JH	mg/L	5	2/27/2018 11:48:49 AM	R49437
Sulfate	30	0.48	2.5		mg/L	5	2/27/2018 11:48:49 AM	R49437
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/27/2018 7:52:43 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.2	0.0049	0.010		mg/L	5	2/14/2018 6:44:11 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:42:33 PM	A49128
Calcium	93	0.078	1.0		mg/L	1	2/14/2018 5:42:33 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:42:33 PM	A49128
Copper	0.0044	0.0032	0.0060	J	mg/L	1	2/14/2018 5:42:33 PM	A49128
Iron	0.044	0.016	0.020		mg/L	1	2/14/2018 5:42:33 PM	A49128
Magnesium	14	0.25	1.0		mg/L	1	2/14/2018 5:42:33 PM	A49128
Manganese	1.4	0.0020	0.010	*	mg/L	5	2/14/2018 6:44:11 PM	A49128
Potassium	0.37	0.11	1.0	J	mg/L	1	2/14/2018 5:42:33 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	2/15/2018 4:07:48 PM	A49169
Sodium	310	0.82	5.0		mg/L	5	2/14/2018 6:44:11 PM	A49128
Zinc	0.0094	0.0021	0.010	J	mg/L	1	2/14/2018 5:42:33 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.2	0.0050	0.010		mg/L	5	2/27/2018 9:42:57 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 5:01:13 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:34:34 PM	36678
Copper	0.0059	0.0041	0.0060	J	mg/L	1	2/23/2018 9:34:34 PM	36678
Iron	0.27	0.010	0.020		mg/L	1	2/27/2018 9:40:56 PM	36678
Manganese	1.3	0.0055	0.010	*	mg/L	5	2/27/2018 9:42:57 PM	36678
Silver	0.0023	0.0012	0.0050	J	mg/L	1	2/27/2018 9:40:56 PM	36678
Zinc	0.0044	0.0033	0.010	J	mg/L	1	3/1/2018 5:01:13 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0033	0.0021	0.0050	J	mg/L	5	2/21/2018 9:15:00 PM	B49298
Lead	0.00018	0.00017	0.00050	J	mg/L	1	2/20/2018 12:48:33 AM	C49231
Selenium	0.0085	0.0076	0.010	J	mg/L	10	2/26/2018 7:36:55 PM	C49385
Uranium	0.011	0.000096	0.00050		mg/L	1	2/20/2018 12:48:33 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 3:30:00 PM
Lab ID: 1802642-003
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0046	0.00041	0.0010		mg/L	1	2/27/2018 1:48:54 PM	36678
Lead	0.00088	0.00023	0.00050		mg/L	1	2/27/2018 1:48:54 PM	36678
Selenium	ND	0.0049	0.0050		mg/L	5	3/7/2018 12:57:59 PM	36810
Uranium	0.012	0.000068	0.00050		mg/L	1	2/27/2018 1:48:54 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000069	0.000037	0.00020	J	mg/L	1	2/23/2018 12:32:47 PM	36669
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3.3	0.062	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Ethylbenzene	1.8	0.093	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Methyl tert-butyl ether (MTBE)	29	0.24	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2,4-Trimethylbenzene	0.22	0.11	1.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Naphthalene	1.0	0.11	2.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
1-Methylnaphthalene	0.92	0.16	4.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
2-Methylnaphthalene	0.66	0.15	4.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 7:40:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 7:40:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 7:40:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 3:30:00 PM
Lab ID: 1802642-003 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 7:40:00 PM	R49114
Isopropylbenzene	0.20	0.051	1.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 7:40:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
n-Propylbenzene	0.21	0.074	1.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
sec-Butylbenzene	0.13	0.11	1.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
tert-Butylbenzene	0.16	0.10	1.0	J	µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 7:40:00 PM	R49114
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 7:40:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	80.5	0	70-130		%Rec	1	2/13/2018 7:40:00 PM	R49114
Surr: 4-Bromofluorobenzene	82.0	0	70-130		%Rec	1	2/13/2018 7:40:00 PM	R49114
Surr: Dibromofluoromethane	85.2	0	70-130		%Rec	1	2/13/2018 7:40:00 PM	R49114
Surr: Toluene-d8	86.0	0	70-130		%Rec	1	2/13/2018 7:40:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 3:30:00 PM
Lab ID: 1802642-003 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.12	0.0097	0.050		mg/L	1	2/13/2018 1:35:19 PM	R49107
Surr: BFB	116	0	70-130		%Rec	1	2/13/2018 1:35:19 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:00:00 PM
Lab ID: 1802642-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/13/2018 4:53:00 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 4:53:00 PM	36465
Surr: DNOP	128	0	77.5-161		%Rec	1	2/13/2018 4:53:00 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.68	0.22	0.50		mg/L	5	2/27/2018 12:13:37 PM	R49437
Chloride	220	5.0	10		mg/L	20	2/27/2018 12:26:01 PM	R49437
Bromide	1.5	0.073	0.50		mg/L	5	2/27/2018 12:13:37 PM	R49437
Phosphorus, Orthophosphate (As P)	2.1	1.2	2.5	JH	mg/L	5	2/27/2018 12:13:37 PM	R49437
Sulfate	61	0.48	2.5		mg/L	5	2/27/2018 12:13:37 PM	R49437
Nitrate+Nitrite as N	0.31	0.13	1.0	J	mg/L	5	2/27/2018 8:05:08 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.097	0.00099	0.0020		mg/L	1	2/14/2018 5:44:32 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:44:32 PM	A49128
Calcium	16	0.078	1.0		mg/L	1	2/14/2018 5:44:32 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:44:32 PM	A49128
Copper	0.0049	0.0032	0.0060	J	mg/L	1	2/14/2018 5:44:32 PM	A49128
Iron	ND	0.016	0.020		mg/L	1	2/14/2018 5:44:32 PM	A49128
Magnesium	2.7	0.25	1.0		mg/L	1	2/14/2018 5:44:32 PM	A49128
Manganese	0.12	0.00039	0.0020	*	mg/L	1	2/14/2018 5:44:32 PM	A49128
Potassium	1.6	0.11	1.0		mg/L	1	2/14/2018 5:44:32 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	3/12/2018 9:32:57 PM	A49712
Sodium	470	0.82	5.0		mg/L	5	2/14/2018 6:46:09 PM	A49128
Zinc	0.0099	0.0021	0.010	J	mg/L	1	2/14/2018 5:44:32 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.095	0.0010	0.0020		mg/L	1	2/23/2018 9:36:29 PM	36678
Cadmium	ND	0.0029	0.010		mg/L	5	3/1/2018 8:52:58 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:36:29 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:36:29 PM	36678
Iron	0.046	0.010	0.020		mg/L	1	2/27/2018 9:45:03 PM	36678
Manganese	0.11	0.0011	0.0020	*	mg/L	1	2/23/2018 9:36:29 PM	36678
Silver	ND	0.0012	0.0050		mg/L	1	2/27/2018 9:45:03 PM	36678
Zinc	ND	0.016	0.050		mg/L	5	3/1/2018 8:52:58 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	2/21/2018 9:19:56 PM	B49298
Lead	0.00028	0.00017	0.00050	J	mg/L	1	2/20/2018 12:53:27 AM	C49231
Selenium	0.0045	0.0038	0.0050	J	mg/L	5	2/21/2018 9:19:56 PM	B49298
Uranium	0.025	0.00048	0.0025		mg/L	5	2/21/2018 9:19:56 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:00:00 PM
Lab ID: 1802642-004 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/28/2018 6:45:28 PM	36678
Lead	0.00042	0.00023	0.00050	J	mg/L	1	2/27/2018 1:53:49 PM	36678
Selenium	0.0054	0.00098	0.0010		mg/L	1	3/6/2018 5:04:03 PM	36810
Uranium	0.024	0.00034	0.0025		mg/L	5	2/28/2018 6:45:28 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000064	0.000037	0.00020	J	mg/L	1	2/23/2018 12:34:45 PM	36669
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.16	0.062	1.0	J	µg/L	1	2/13/2018 8:04:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Ethylbenzene	0.098	0.093	1.0	J	µg/L	1	2/13/2018 8:04:00 PM	R49114
Methyl tert-butyl ether (MTBE)	33	0.24	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2,4-Trimethylbenzene	0.16	0.11	1.0	J	µg/L	1	2/13/2018 8:04:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 8:04:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 8:04:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 8:04:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:00:00 PM
Lab ID: 1802642-004 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 8:04:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 8:04:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 8:04:00 PM	R49114
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 8:04:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	81.7	0	70-130		%Rec	1	2/13/2018 8:04:00 PM	R49114
Surr: 4-Bromofluorobenzene	80.8	0	70-130		%Rec	1	2/13/2018 8:04:00 PM	R49114
Surr: Dibromofluoromethane	84.8	0	70-130		%Rec	1	2/13/2018 8:04:00 PM	R49114
Surr: Toluene-d8	86.0	0	70-130		%Rec	1	2/13/2018 8:04:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:00:00 PM
Lab ID: 1802642-004
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.088	0.0097	0.050		mg/L	1	2/13/2018 1:58:13 PM	R49107
Surr: BFB	115	0	70-130		%Rec	1	2/13/2018 1:58:13 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	6.9	0.63	1.0		mg/L	1	2/13/2018 5:15:17 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 5:15:17 PM	36465
Surr: DNOP	128	0	77.5-161		%Rec	1	2/13/2018 5:15:17 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.6	0.22	0.50		mg/L	5	2/27/2018 12:38:25 PM	R49437
Chloride	1700	50	100		mg/L	200	3/1/2018 7:17:03 PM	R49508
Bromide	4.4	0.073	0.50		mg/L	5	2/27/2018 12:38:25 PM	R49437
Phosphorus, Orthophosphate (As P)	2.7	1.2	2.5	H	mg/L	5	2/27/2018 12:38:25 PM	R49437
Sulfate	10	0.48	2.5		mg/L	5	2/27/2018 12:38:25 PM	R49437
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/27/2018 8:54:46 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.98	0.00099	0.0020		mg/L	1	2/14/2018 5:46:32 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:46:32 PM	A49128
Calcium	150	0.39	5.0		mg/L	5	2/14/2018 6:48:01 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:46:32 PM	A49128
Copper	0.0036	0.0032	0.0060	J	mg/L	1	2/14/2018 5:46:32 PM	A49128
Iron	1.3	0.082	0.10	*	mg/L	5	2/14/2018 6:48:01 PM	A49128
Magnesium	27	0.25	1.0		mg/L	1	2/14/2018 5:46:32 PM	A49128
Manganese	1.4	0.0020	0.010	*	mg/L	5	2/14/2018 6:48:01 PM	A49128
Potassium	3.5	0.11	1.0		mg/L	1	2/14/2018 5:46:32 PM	A49128
Silver	0.0019	0.0018	0.0050	J	mg/L	1	2/15/2018 4:09:51 PM	A49169
Sodium	1300	8.2	50		mg/L	50	3/2/2018 12:36:38 AM	C49490
Zinc	0.017	0.0021	0.010		mg/L	1	2/14/2018 5:46:32 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.2	0.010	0.020		mg/L	10	2/27/2018 9:51:02 PM	36678
Cadmium	ND	0.0029	0.010		mg/L	5	3/1/2018 8:54:39 PM	36678
Chromium	0.0045	0.0018	0.0060	J	mg/L	1	2/23/2018 9:38:23 PM	36678
Copper	0.031	0.0041	0.0060		mg/L	1	2/23/2018 9:38:23 PM	36678
Iron	5.8	0.10	0.20	*	mg/L	10	2/27/2018 9:51:02 PM	36678
Manganese	1.3	0.011	0.020	*	mg/L	10	2/27/2018 9:51:02 PM	36678
Silver	0.0038	0.0012	0.0050	J	mg/L	1	2/27/2018 9:47:02 PM	36678
Zinc	0.059	0.016	0.050		mg/L	5	3/1/2018 8:54:39 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	2/21/2018 9:24:51 PM	B49298
Lead	0.0029	0.00017	0.00050		mg/L	1	2/20/2018 12:58:21 AM	C49231
Selenium	0.019	0.0038	0.0050		mg/L	5	2/21/2018 9:24:51 PM	B49298
Uranium	0.038	0.00048	0.0025	*	mg/L	5	2/21/2018 9:24:51 PM	B49298

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.020	0.0021	0.0050	*	mg/L	5	2/27/2018 1:58:44 PM	36678
Lead	0.016	0.0011	0.0025	*	mg/L	5	2/27/2018 1:58:44 PM	36678
Selenium	0.022	0.0049	0.0050		mg/L	5	3/6/2018 5:08:58 PM	36810
Uranium	0.074	0.00034	0.0025	*	mg/L	5	2/27/2018 1:58:44 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000085	0.000037	0.00020	J	mg/L	1	2/23/2018 12:36:44 PM	36669
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Aniline	ND	3.1	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Benzoic acid	8.3	3.9	20	J	µg/L	1	3/1/2018 10:46:45 AM	36490
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 10:46:45 AM	36490
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 10:46:45 AM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 10:46:45 AM	36490
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 10:46:45 AM	36490
2,4-Dimethylphenol	12	2.8	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 10:46:45 AM	36490
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 10:46:45 AM	36490
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 10:46:45 AM	36490
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 10:46:45 AM	36490
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Naphthalene	ND	2.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 10:46:45 AM	36490
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 10:46:45 AM	36490
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 10:46:45 AM	36490
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Phenol	4.1	3.1	10	J	µg/L	1	3/1/2018 10:46:45 AM	36490
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 10:46:45 AM	36490
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 10:46:45 AM	36490
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 10:46:45 AM	36490

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 10:46:45 AM	36490
Surr: 2-Fluorophenol	60.8	0	15-114		%Rec	1	3/1/2018 10:46:45 AM	36490
Surr: Phenol-d5	44.0	0	15-97.9		%Rec	1	3/1/2018 10:46:45 AM	36490
Surr: 2,4,6-Tribromophenol	81.3	0	15-161		%Rec	1	3/1/2018 10:46:45 AM	36490
Surr: Nitrobenzene-d5	92.5	0	29.3-120		%Rec	1	3/1/2018 10:46:45 AM	36490
Surr: 2-Fluorobiphenyl	81.9	0	17.5-116		%Rec	1	3/1/2018 10:46:45 AM	36490
Surr: 4-Terphenyl-d14	66.0	0	21-92.2		%Rec	1	3/1/2018 10:46:45 AM	36490
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	68	0.12	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Toluene	0.66	0.13	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
Ethylbenzene	4.9	0.19	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Methyl tert-butyl ether (MTBE)	240	0.48	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2,4-Trimethylbenzene	0.65	0.23	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.17	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.26	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Naphthalene	ND	0.23	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1-Methylnaphthalene	1.6	0.32	8.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
2-Methylnaphthalene	ND	0.30	8.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Acetone	41	1.6	20		µg/L	2	2/13/2018 8:28:00 PM	R49114
Bromobenzene	ND	0.28	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Bromodichloromethane	ND	0.35	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Bromoform	ND	0.42	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Bromomethane	ND	0.51	6.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
2-Butanone	ND	2.3	20		µg/L	2	2/13/2018 8:28:00 PM	R49114
Carbon disulfide	ND	0.80	20		µg/L	2	2/13/2018 8:28:00 PM	R49114
Carbon Tetrachloride	ND	0.22	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Chlorobenzene	ND	0.21	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Chloroethane	ND	0.47	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Chloroform	ND	0.80	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Chloromethane	ND	0.59	6.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
cis-1,2-DCE	ND	0.41	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.16	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	2.8	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Dibromochloromethane	ND	0.14	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Dibromomethane	ND	0.18	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2-Dichlorobenzene	ND	0.18	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.30	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1-Dichloroethane	1.1	0.80	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1-Dichloroethene	ND	0.16	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2-Dichloropropane	ND	0.20	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,3-Dichloropropane	ND	0.33	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
2,2-Dichloropropane	ND	0.31	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1-Dichloropropene	ND	0.19	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
2-Hexanone	ND	1.3	20		µg/L	2	2/13/2018 8:28:00 PM	R49114
Isopropylbenzene	0.65	0.10	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
4-Isopropyltoluene	0.34	0.19	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	2/13/2018 8:28:00 PM	R49114
Methylene Chloride	0.47	0.22	6.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
n-Butylbenzene	ND	0.26	6.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
n-Propylbenzene	0.54	0.15	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
sec-Butylbenzene	0.23	0.22	2.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
Styrene	ND	0.31	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
tert-Butylbenzene	ND	0.21	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.21	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.27	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.26	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.44	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.23	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.28	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1,1-Trichloroethane	ND	0.15	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,1,2-Trichloroethane	ND	0.28	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Trichloroethene (TCE)	ND	0.22	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Trichlorofluoromethane	ND	0.37	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
1,2,3-Trichloropropane	ND	0.78	4.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Vinyl chloride	ND	0.36	2.0		µg/L	2	2/13/2018 8:28:00 PM	R49114
Xylenes, Total	2.9	0.64	3.0	J	µg/L	2	2/13/2018 8:28:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	80.9	0	70-130		%Rec	2	2/13/2018 8:28:00 PM	R49114
Surr: 4-Bromofluorobenzene	79.8	0	70-130		%Rec	2	2/13/2018 8:28:00 PM	R49114
Surr: Dibromofluoromethane	83.7	0	70-130		%Rec	2	2/13/2018 8:28:00 PM	R49114
Surr: Toluene-d8	85.9	0	70-130		%Rec	2	2/13/2018 8:28:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018 4:45:00 PM
Lab ID: 1802642-005 **Matrix:** AQUEOUS **Received Date:** 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.62	0.0097	0.050		mg/L	1	2/13/2018 3:30:18 PM	R49107
Surr: BFB	118	0	70-130		%Rec	1	2/13/2018 3:30:18 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 05
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018
Lab ID: 1802642-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.4	0.63	1.0		mg/L	1	2/13/2018 5:37:27 PM	36465
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/13/2018 5:37:27 PM	36465
Surr: DNOP	132	0	77.5-161		%Rec	1	2/13/2018 5:37:27 PM	36465
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.5	0.22	0.50		mg/L	5	2/27/2018 1:28:03 PM	R49437
Chloride	240	5.0	10		mg/L	20	2/27/2018 1:40:28 PM	R49437
Bromide	1.2	0.073	0.50		mg/L	5	2/27/2018 1:28:03 PM	R49437
Phosphorus, Orthophosphate (As P)	1.8	1.2	2.5	JH	mg/L	5	2/27/2018 1:28:03 PM	R49437
Sulfate	6.3	0.48	2.5		mg/L	5	2/27/2018 1:28:03 PM	R49437
Nitrate+Nitrite as N	ND	0.13	1.0		mg/L	5	2/27/2018 9:07:11 PM	R49437
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.9	0.0049	0.010		mg/L	5	3/2/2018 12:40:10 AM	C49490
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:48:26 PM	A49128
Calcium	77	0.078	1.0		mg/L	1	2/14/2018 5:48:26 PM	A49128
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 5:48:26 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:48:26 PM	A49128
Iron	1.6	0.082	0.10	*	mg/L	5	3/6/2018 3:38:03 PM	A49583
Magnesium	14	0.25	1.0		mg/L	1	2/14/2018 5:48:26 PM	A49128
Manganese	0.96	0.00039	0.0020	*	mg/L	1	3/2/2018 12:38:30 AM	C49490
Potassium	0.31	0.11	1.0	J	mg/L	1	2/14/2018 5:48:26 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	2/15/2018 4:11:45 PM	A49169
Sodium	350	0.82	5.0		mg/L	5	3/2/2018 12:40:10 AM	C49490
Zinc	0.0086	0.0021	0.010	J	mg/L	1	2/14/2018 5:48:26 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.3	0.010	0.020	*	mg/L	10	2/27/2018 9:57:07 PM	36678
Cadmium	ND	0.00058	0.0020		mg/L	1	3/1/2018 5:06:26 PM	36678
Chromium	ND	0.0018	0.0060		mg/L	1	2/23/2018 9:40:07 PM	36678
Copper	ND	0.0041	0.0060		mg/L	1	2/23/2018 9:40:07 PM	36678
Iron	5.7	0.10	0.20	*	mg/L	10	2/27/2018 9:57:07 PM	36678
Manganese	0.98	0.0011	0.0020	*	mg/L	1	2/23/2018 9:40:07 PM	36678
Silver	0.0018	0.0012	0.0050	J	mg/L	1	2/27/2018 9:53:18 PM	36678
Zinc	0.0090	0.0033	0.010	J	mg/L	1	3/1/2018 5:06:26 PM	36678
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0044	0.0021	0.0050	J	mg/L	5	2/21/2018 9:29:46 PM	B49298
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 1:13:09 AM	C49231
Selenium	ND	0.0038	0.0050		mg/L	5	2/21/2018 9:29:46 PM	B49298
Uranium	0.00033	0.000096	0.00050	J	mg/L	1	2/20/2018 1:13:09 AM	C49231

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 05
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018
Lab ID: 1802642-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0055	0.00041	0.0010		mg/L	1	2/27/2018 2:03:38 PM	36678
Lead	0.0020	0.00023	0.00050		mg/L	1	2/27/2018 2:03:38 PM	36678
Selenium	0.0041	0.00098	0.0010		mg/L	1	3/6/2018 5:13:52 PM	36810
Uranium	0.00042	0.000068	0.00050	J	mg/L	1	2/27/2018 2:03:38 PM	36678
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000083	0.000037	0.00020	J	mg/L	1	2/23/2018 12:38:43 PM	36669
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	26	0.062	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Toluene	0.42	0.064	1.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
Ethylbenzene	30	0.093	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Methyl tert-butyl ether (MTBE)	130	0.24	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2,4-Trimethylbenzene	0.36	0.11	1.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
1,3,5-Trimethylbenzene	0.10	0.087	1.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Naphthalene	4.2	0.11	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1-Methylnaphthalene	5.4	0.16	4.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
2-Methylnaphthalene	1.3	0.15	4.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
Acetone	9.9	0.82	10	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 8:52:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 8:52:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 05
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018
Lab ID: 1802642-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 8:52:00 PM	R49114
Isopropylbenzene	3.1	0.051	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 8:52:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
n-Butylbenzene	0.53	0.13	3.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
n-Propylbenzene	2.8	0.074	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
sec-Butylbenzene	1.0	0.11	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
tert-Butylbenzene	0.28	0.10	1.0	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 8:52:00 PM	R49114
Xylenes, Total	1.1	0.32	1.5	J	µg/L	1	2/13/2018 8:52:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	79.7	0	70-130		%Rec	1	2/13/2018 8:52:00 PM	R49114
Surr: 4-Bromofluorobenzene	83.4	0	70-130		%Rec	1	2/13/2018 8:52:00 PM	R49114
Surr: Dibromofluoromethane	84.8	0	70-130		%Rec	1	2/13/2018 8:52:00 PM	R49114
Surr: Toluene-d8	85.5	0	70-130		%Rec	1	2/13/2018 8:52:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 05
Project: 1st QTR 2018 GW Sampling (API)
Collection Date: 2/9/2018
Lab ID: 1802642-006
Matrix: AQUEOUS
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.76	0.0097	0.050		mg/L	1	2/13/2018 2:44:22 PM	R49107
Surr: BFB	118	0	70-130		%Rec	1	2/13/2018 2:44:22 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling (API)
Collection Date:
Lab ID: 1802642-007
Matrix: TRIP BLANK
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Toluene	ND	0.064	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Naphthalene	ND	0.11	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Acetone	ND	0.82	10		µg/L	1	2/13/2018 9:16:00 PM	R49114
Bromobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Bromoform	ND	0.21	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Bromomethane	ND	0.26	3.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
2-Butanone	ND	1.1	10		µg/L	1	2/13/2018 9:16:00 PM	R49114
Carbon disulfide	ND	0.40	10		µg/L	1	2/13/2018 9:16:00 PM	R49114
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Chloroethane	ND	0.23	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Chloroform	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Chloromethane	ND	0.29	3.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Dibromomethane	ND	0.091	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling (API)
Collection Date:
Lab ID: 1802642-007
Matrix: TRIP BLANK
Received Date: 2/10/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
2-Hexanone	ND	0.66	10		µg/L	1	2/13/2018 9:16:00 PM	R49114
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/13/2018 9:16:00 PM	R49114
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Styrene	ND	0.16	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/13/2018 9:16:00 PM	R49114
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/13/2018 9:16:00 PM	R49114
Surr: 1,2-Dichloroethane-d4	84.8	0	70-130		%Rec	1	2/13/2018 9:16:00 PM	R49114
Surr: 4-Bromofluorobenzene	77.5	0	70-130		%Rec	1	2/13/2018 9:16:00 PM	R49114
Surr: Dibromofluoromethane	87.1	0	70-130		%Rec	1	2/13/2018 9:16:00 PM	R49114
Surr: Toluene-d8	85.0	0	70-130		%Rec	1	2/13/2018 9:16:00 PM	R49114
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.019	0.0097	0.050	J	mg/L	1	2/13/2018 3:07:23 PM	R49107
Surr: BFB	114	0	70-130		%Rec	1	2/13/2018 3:07:23 PM	R49107

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0451		0.00500	1	02/16/2018 14:29	WG1073233

Method Blank (MB)

(MB) R3286979-1 02/16/18 14:15

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.0018	0.00500

L969898-01 Original Sample (OS) • Duplicate (DUP)

(OS) L969898-01 02/16/18 14:48 • (DUP) R3286979-7 02/16/18 14:49

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3286979-2 02/16/18 14:16 • (LCSD) R3286979-3 02/16/18 14:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.102	0.103	102	103	85-115			0.976	20

L969718-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L969718-01 02/16/18 14:29 • (MS) R3286979-5 02/16/18 14:30 • (MSD) R3286979-6 02/16/18 14:31

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0451	0.144	0.145	98.9	99.9	1	75-125			0.692	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.44	1.0	0.5000	0	88.4	50	150			J
Chromium	0.0059	0.0060	0.006000	0	98.2	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.2	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.5	50	150			J
Potassium	0.51	1.0	0.5000	0	101	50	150			J
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Sodium	0.45	1.0	0.5000	0	89.1	50	150			J
Zinc	0.0041	0.010	0.005000	0	81.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Calcium	46	1.0	50.00	0	92.0	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A49128**			RunNo: **49128**					
Prep Date:		Analysis Date: **2/14/2018**			SeqNo: **1584161**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	47	1.0	50.00	0	94.6	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Potassium	46	1.0	50.00	0	92.0	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Sodium	46	1.0	50.00	0	92.8	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A49169**			RunNo: **49169**					
Prep Date:		Analysis Date: **2/15/2018**			SeqNo: **1585686**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A49169**			RunNo: **49169**					
Prep Date:		Analysis Date: **2/15/2018**			SeqNo: **1585687**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0030	0.0050	0.005000	0	59.4	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A49169**			RunNo: **49169**					
Prep Date:		Analysis Date: **2/15/2018**			SeqNo: **1585688**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID	**MB-C**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **C49490**			RunNo: **49490**					
Prep Date:		Analysis Date: **3/1/2018**			SeqNo: **1599586**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49490**	RunNo:	**49490**					
Prep Date:		Analysis Date:	**3/1/2018**	SeqNo:	**1599587**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Sodium	0.47	1.0	0.5000	0	93.3	50	150			J

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49490**	RunNo:	**49490**					
Prep Date:		Analysis Date:	**3/1/2018**	SeqNo:	**1599588**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Sodium	48	1.0	50.00	0	95.8	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A49583**	RunNo:	**49583**					
Prep Date:		Analysis Date:	**3/6/2018**	SeqNo:	**1603313**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A49583**	RunNo:	**49583**					
Prep Date:		Analysis Date:	**3/6/2018**	SeqNo:	**1603314**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020	0.02000	0	103	50	150			

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A49583**	RunNo:	**49583**					
Prep Date:		Analysis Date:	**3/6/2018**	SeqNo:	**1603445**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	97.6	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A49712**	RunNo:	**49712**					
Prep Date:		Analysis Date:	**3/12/2018**	SeqNo:	**1608453**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A49712**	RunNo:	**49712**					
Prep Date:		Analysis Date:	**3/12/2018**	SeqNo:	**1608454**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A49712**	RunNo:	**49712**					
Prep Date:		Analysis Date:	**3/12/2018**	SeqNo:	**1608455**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	112	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	**LLLCS-36678**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594024** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0058	0.0060	0.006000	0	96.5	50	150			J
Copper	0.0045	0.0060	0.006000	0	75.5	50	150			J
Iron	0.018	0.020	0.02000	0	90.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID	**LCS-36678**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49369**
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1594025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Zinc	0.48	0.010	0.5000	0	95.9	85	115			

Sample ID	**LCS-36678**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49388**
Prep Date:	**2/22/2018**	Analysis Date:	**2/26/2018**	SeqNo:	**1595007** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49388**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/26/2018**	SeqNo:	**1595106**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0029	0.0050								J

Sample ID	**LLLCS-36678**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49388**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/26/2018**	SeqNo:	**1595107**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	98.2	50	150			J

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49490**					
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1599519**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.00067	0.0020								J

Sample ID	**LLLCS-36678**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49490**					
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1599520**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			

Sample ID	**LCS-36678**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49490**					
Prep Date:	**2/22/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1599521**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588407** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	94.4	85	115			
Uranium	0.012	0.00050	0.01250	0	99.1	85	115			

Sample ID **1802642-002EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **NAPIS-2**	Batch ID: **C49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1588429** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	104	70	130			
Uranium	0.015	0.00050	0.01250	0.0002945	115	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**
15-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B49298**	RunNo:	**49298**					
Prep Date:		Analysis Date:	**2/21/2018**	SeqNo:	**1591420**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.1	50	150			J
Selenium	0.00090	0.0010	0.001000	0	90.5	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.5	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49298**	RunNo:	**49298**					
Prep Date:		Analysis Date:	**2/21/2018**	SeqNo:	**1591421**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Selenium	0.023	0.0010	0.02500	0	91.0	85	115			
Uranium	0.012	0.00050	0.01250	0	95.5	85	115			

Sample ID	**1802642-002EMSLL**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**NAPIS-2**	Batch ID:	**B49298**	RunNo:	**49298**					
Prep Date:		Analysis Date:	**2/21/2018**	SeqNo:	**1591431**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.004707	92.3	70	130			
Selenium	0.11	0.0050	0.1250	0.004006	88.7	70	130			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595034**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595035**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00091	0.0010	0.001000	0	90.7	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595036**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595036** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**MB-36678**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595142**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36678**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595143**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.7	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.4	50	150			J

Sample ID	**MSLCS-36678**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36678**	RunNo:	**49403**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595144**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Uranium	0.012	0.00050	0.01250	0	96.7	85	115			

Sample ID	**MB-36810**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602819**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36810**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602820**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00091	0.0010	0.001000	0	90.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**MSLCS-36810**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36810**	RunNo:	**49582**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/6/2018**	SeqNo:	**1602821**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	93.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID	**MB-36669**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36669**	RunNo:	**49349**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1593113**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000077	0.00020								J

Sample ID	**LCS-36669**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36669**	RunNo:	**49349**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/23/2018**	SeqNo:	**1593116**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49437**	RunNo: **49437**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.17	0.50								J
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49437**	RunNo: **49437**
Prep Date:	Analysis Date: **2/27/2018**	SeqNo: **1596821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	4.8	0.50	5.000	0	95.1	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	5.3	0.50	5.000	0	105	90	110			
Sulfate	9.5	0.50	10.00	0	95.0	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49508**	RunNo: **49508**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599773** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49508**	RunNo: **49508**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599774** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.6	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **MB-36465**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		120	77.5	161			

Sample ID **LCS-36465**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36465**	RunNo: **49069**
Prep Date: **2/12/2018**	Analysis Date: **2/13/2018**	SeqNo: **1580674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	113	92.3	135			
Surr: DNOP	0.56		0.5000		111	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.1	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.5	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.9	70	130			
Surr: Toluene-d8	8.4		10.00		84.2	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**
15-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**	
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49114**	RunNo: **49114**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	7.7		10.00		77.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.4		10.00		84.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **lcs-36490**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597595** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	94	10	100.0	0	93.9	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	83.4	40.5	108			
2-Chlorophenol	170	10	200.0	0	83.3	35	103			
1,4-Dichlorobenzene	78	10	100.0	0	78.2	24.7	93.7			
2,4-Dinitrotoluene	85	10	100.0	0	84.7	35.6	91.4			
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.5	41.6	114			
4-Nitrophenol	140	10	200.0	0	68.4	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.2	25.3	98.5			
Phenol	110	10	200.0	0	56.7	20.9	75.1			
Pyrene	88	10	100.0	0	88.2	45.6	108			
1,2,4-Trichlorobenzene	92	10	100.0	0	91.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		63.8	15	114			
Surr: Phenol-d5	120		200.0		60.6	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		92.7	15	161			
Surr: Nitrobenzene-d5	89		100.0		89.5	29.3	120			
Surr: 2-Fluorobiphenyl	94		100.0		93.5	17.5	116			
Surr: 4-Terphenyl-d14	62		100.0		61.8	21	92.2			

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.9	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**
15-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (API)

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**	
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **mb-36490**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36490**	RunNo: **49466**
Prep Date: **2/13/2018**	Analysis Date: **2/28/2018**	SeqNo: **1597597** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	74		200.0		36.9	15	114			
Surr: Phenol-d5	66		200.0		32.8	15	97.9			
Surr: 2,4,6-Tribromophenol	140		200.0		70.1	15	161			
Surr: Nitrobenzene-d5	60		100.0		59.5	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.5	17.5	116			
Surr: 4-Terphenyl-d14	47		100.0		47.3	21	92.2			

Sample ID **1802642-005gms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OAPIS-1**	Batch ID: **36490**	RunNo: **49495**
Prep Date: **2/13/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599032** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	92	10	100.0	0	91.9	15	123			
4-Chloro-3-methylphenol	190	10	200.0	0	96.4	26.6	118			
2-Chlorophenol	170	10	200.0	0	84.4	15	120			
1,4-Dichlorobenzene	83	10	100.0	0	82.6	19	108			
2,4-Dinitrotoluene	88	10	100.0	0	88.3	27.8	103			
N-Nitrosodi-n-propylamine	91	10	100.0	0	91.1	32.3	126			
4-Nitrophenol	110	10	200.0	0	57.2	15	72.1			
Pentachlorophenol	160	20	200.0	0	80.4	15	114			
Phenol	100	10	200.0	4.120	48.4	15	67.5			
Pyrene	78	10	100.0	0	78.5	31.2	112			
1,2,4-Trichlorobenzene	100	10	100.0	0	99.8	22.1	123			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **1802642-005gms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OAPIS-1**	Batch ID: **36490**	RunNo: **49495**
Prep Date: **2/13/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599032** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		61.4	15	114			
Surr: Phenol-d5	97		200.0		48.4	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		84.1	15	161			
Surr: Nitrobenzene-d5	92		100.0		92.1	29.3	120			
Surr: 2-Fluorobiphenyl	83		100.0		82.8	17.5	116			
Surr: 4-Terphenyl-d14	60		100.0		60.2	21	92.2			

Sample ID **1802642-005gmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OAPIS-1**	Batch ID: **36490**	RunNo: **49495**
Prep Date: **2/13/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599033** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	89	10	100.0	0	88.8	15	123	3.36	30.5	
4-Chloro-3-methylphenol	180	10	200.0	0	89.6	26.6	118	7.32	50	
2-Chlorophenol	170	10	200.0	0	83.8	15	120	0.630	36.3	
1,4-Dichlorobenzene	76	10	100.0	0	76.2	19	108	8.03	42.1	
2,4-Dinitrotoluene	76	10	100.0	0	75.7	27.8	103	15.3	28.5	
N-Nitrosodi-n-propylamine	92	10	100.0	0	92.0	32.3	126	1.05	25.4	
4-Nitrophenol	71	10	200.0	0	35.3	15	72.1	47.2	50	
Pentachlorophenol	150	20	200.0	0	73.0	15	114	9.66	50	
Phenol	97	10	200.0	4.120	46.5	15	67.5	3.88	46.1	
Pyrene	79	10	100.0	0	79.2	31.2	112	0.888	34.3	
1,2,4-Trichlorobenzene	92	10	100.0	0	91.5	22.1	123	8.70	43.6	
Surr: 2-Fluorophenol	120		200.0		58.0	15	114	0	0	
Surr: Phenol-d5	93		200.0		46.5	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		82.7	15	161	0	0	
Surr: Nitrobenzene-d5	83		100.0		83.3	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	83		100.0		82.9	17.5	116	0	0	
Surr: 4-Terphenyl-d14	62		100.0		61.7	21	92.2	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802642**

15-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (API)

Sample ID **1802642-001bms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **STP1-NW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0.04520	100	70	130			
Surr: BFB	11		10.00		108	70	130			

Sample ID **1802642-001bmsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **STP1-NW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0.04520	94.9	70	130	4.95	20	
Surr: BFB	11		10.00		108	70	130	0	0	

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581231** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.7	70	130			
Surr: BFB	11		10.00		106	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R49107**	RunNo: **49107**
Prep Date:	Analysis Date: **2/13/2018**	SeqNo: **1581232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1802642 RcptNo: 1

Received By: **Sophia Campuzano** 2/10/2018 9:10:00 AM Sophia Campuzano

Completed By: **Anne Thorne** 2/12/2018 8:24:43 AM Anne Thorne

Reviewed By: JMD 2/12/18 Labeled By DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 18,1 (<2 or >12 unless noted)
Adjusted? no
Checked by: DDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

COOLER 1) 1.3-CF 0.5=0.8, COOLER 2) 1.3-CF 0.5=0.8 COOLER3) 1.4-CF 0.5=0.9 COOLER 4) 2.8-CF 0.5 = 2.3
CUSTODY SEALS INTACT ON COOLERS AND SAMPLE BOTTLES/at 2/12/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4		Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (API)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~4.9 - 0.7 (CF) = 1.2~~ 02/10/18 SRE

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802642 (4 coolers)	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/9/18	1355	WATER	STP1-NW	40 ML VOA-5	HCL	001			✓							✓						
				250 ML AMBER-1	NEAT	001			✓													
				250 ML PLASTIC-1	HNO_3	001												✓				
				125 ML PLASTIC-1	HNO_3	001												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	001													✓			
				125 ML PLASTIC-1	NEAT	001													✓			
	1450	WATER	NAPIS-2	40 ML VOA-5	HCL	002			✓							✓						
				250 ML AMBER-1	NEAT	002			✓													
				250 ML PLASTIC-1	HNO_3	002											•	✓				
				125 ML PLASTIC-1	HNO_3	002												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	002													✓			
				125 ML PLASTIC-1	NEAT	002													✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/10/18	0910			02/10/18	0910
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Coolers:
1.) 1.3 - 0.5(CF) = 0.8
2.) 1.3 - 0.5(CF) = 0.8
3.) 1.4 - 0.5(CF) = 0.9
4.) 2.8 - 0.5(CF) = 2.3 SRE 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (API)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9~~ 0.7(CF) = 1.2 02/10/18

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	4 coolers HEAL No. 1802642	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/9/18	1530	WATER	KA-3	40 ML VOA-5	HCL	001			✓							✓						
				250 ML AMBER-1	NEAT	001			✓													
				250 ML PLASTIC-1	HNO_3	001												✓				
				125ML PLASTIC-1	HNO_3	001												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	001													✓			
				125 ML PLASTIC-1	NEAT	001													✓			
	1600	WATER	NAPIS-3	40 ML VOA-5	HCL	002			✓							✓						
				250 ML AMBER-1	NEAT	002			✓													
				250ML PLASTIC-1	HNO_3	002												✓				
				125ML PLASTIC-1	HNO_3	002												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	002													✓			
				125 ML PLASTIC-1	NEAT	002													✓			

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/10/18	0910			02/10/18	0910
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Coolers:
1.) 1.3 - 0.5(CF) = 0.8
2.) 1.3 - 0.5 (CF) = 0.8
3.) 1.4 - 0.5 (CF) = 0.9
4.) 2.8 - 0.5(CF) = 2.3 BRe 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (API)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9~~ 0.7 (CF) = 1.2 °C 02/10/18 SRC
4 coolers
HEAL No. 1802642

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS	CYANIDE		Air Bubbles (Y or N)
2/9/18	1645	WATER	OAPIS-1	40 ML VOA-1	HCL	001			✓							✓						
				1 L AMBER-1	NEAT	002											✓					
				250 ML AMBER-1	NEAT	003			✓													
				250 ML PLASTIC-1	HNO_3	004												✓				
				125 ML PLASTIC-1	HNO_3	005												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	006													✓			
				125 ML PLASTIC-1	NEAT	007													✓			
				500 ML PLASTIC-1	NaOH	008														✓		

Date: 2/10/18 Time: 0910 Relinquished by:
Received by: Date 02/10/18 Time 0910
Date: Time: Relinquished by:
Received by: Date Time

Remarks: Coolers:
1.) 1.3 - 0.5 (CF) = 0.8
2.) 1.3 - 0.5 (CF) = 0.8
3.) 1.4 - 0.5 (CF) = 0.9
4.) 2.8 - 0.5 (CF) = 2.3 SRC 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (API)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: ~~1.9 - 0.7 (CF) = 1.2~~ SRE 02/10/18
4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/9/18	—	WATER	DUP05	40 ML VOA-5	HCL	206			✓							✓						
"	"	"	"	250 ML AMBER-1	NEAT	206			✓													
"	"	"	"	250 ML PLASTIC-1	HNO_3	206												✓				
"	"	"	"	125 ML PLASTIC-1	HNO_3	206												✓	✓			
"	"	"	"	125 ML PLASTIC-1	H_2SO_4	206													✓			
"	"	"	"	125 ML PLASTIC-1	NEAT	206													✓			
			Trip Blank	3 VOA		-007										✓						
			DDS 2/12/18						✓							✓						

Date: 2/10/18 Time: 0910 Relinquished by: [signature] Received by: [signature] Date: 02/10/18 Time: 0910
Date: Time: Relinquished by: Received by: Date: Time:

Remarks: Coolers:
1.) 1.3 - 0.5 (CF) = 0.8
2.) 1.3 - 0.5 (CF) = 0.8
3.) 1.4 - 0.5 (CF) = 0.9
4.) 2.8 - 0.5 (CF) = 2.3 SRE 02/10/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0451		0.00500	1	02/16/2018 14:29	WG1073233

Method Blank (MB)

(MB) R3286979-1 02/16/18 14:15

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.0018	0.00500

L969898-01 Original Sample (OS) • Duplicate (DUP)

(OS) L969898-01 02/16/18 14:48 • (DUP) R3286979-7 02/16/18 14:49

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3286979-2 02/16/18 14:16 • (LCSD) R3286979-3 02/16/18 14:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.102	0.103	102	103	85-115			0.976	20

L969718-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L969718-01 02/16/18 14:29 • (MS) R3286979-5 02/16/18 14:30 • (MSD) R3286979-6 02/16/18 14:31

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0451	0.144	0.145	98.9	99.9	1	75-125			0.692	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 26, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR Sampling 2018 Outfall OrderNo.: 1802816

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1802816**
Date: **2/26/2018**

CLIENT: Andeavor Gallup
Project: 1st QTR Sampling 2018 Outfall

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 and EP-2
Project: 1st QTR Sampling 2018 Outfall
Collection Date: 2/12/2018 1:25:00 PM
Lab ID: 1802816-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	61	0.63	1.0		mg/L	1	2/16/2018 3:58:26 PM	36547
Motor Oil Range Organics (MRO)	32	5.0	5.0		mg/L	1	2/16/2018 3:58:26 PM	36547
Surr: DNOP	106	0	77.5-161		%Rec	1	2/16/2018 3:58:26 PM	36547
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	780	2.0	2.0		mg/L	1	2/19/2018 3:50:00 PM	36526
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.62	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Toluene	2.3	0.64	10	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
Ethylbenzene	1.3	0.93	10	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2,4-Trimethylbenzene	2.9	1.1	10	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
1,3,5-Trimethylbenzene	1.3	0.87	10	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Naphthalene	6.2	1.1	20	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
1-Methylnaphthalene	28	1.6	40	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
2-Methylnaphthalene	25	1.5	40	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
Acetone	1100	8.2	100		µg/L	10	2/16/2018 9:39:00 AM	R49200
Bromobenzene	ND	1.4	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Bromodichloromethane	ND	1.8	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Bromoform	ND	2.1	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Bromomethane	ND	2.6	30		µg/L	10	2/16/2018 9:39:00 AM	R49200
2-Butanone	ND	11	100		µg/L	10	2/16/2018 9:39:00 AM	R49200
Carbon disulfide	ND	4.0	100		µg/L	10	2/16/2018 9:39:00 AM	R49200
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Chlorobenzene	ND	1.1	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Chloroethane	ND	2.3	20		µg/L	10	2/16/2018 9:39:00 AM	R49200
Chloroform	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Chloromethane	ND	2.9	30		µg/L	10	2/16/2018 9:39:00 AM	R49200
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
cis-1,2-DCE	ND	2.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/16/2018 9:39:00 AM	R49200
Dibromochloromethane	ND	0.72	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Dibromomethane	ND	0.91	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/16/2018 9:39:00 AM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 and EP-2
Project: 1st QTR Sampling 2018 Outfall
Collection Date: 2/12/2018 1:25:00 PM
Lab ID: 1802816-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1-Dichloroethane	ND	4.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1-Dichloroethene	ND	0.81	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
2-Hexanone	ND	6.6	100		µg/L	10	2/16/2018 9:39:00 AM	R49200
Isopropylbenzene	ND	0.51	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
4-Isopropyltoluene	ND	0.96	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/16/2018 9:39:00 AM	R49200
Methylene Chloride	ND	1.1	30		µg/L	10	2/16/2018 9:39:00 AM	R49200
n-Butylbenzene	ND	1.3	30		µg/L	10	2/16/2018 9:39:00 AM	R49200
n-Propylbenzene	ND	0.74	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
sec-Butylbenzene	ND	1.1	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Styrene	ND	1.6	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/16/2018 9:39:00 AM	R49200
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/16/2018 9:39:00 AM	R49200
Vinyl chloride	ND	1.8	10		µg/L	10	2/16/2018 9:39:00 AM	R49200
Xylenes, Total	7.1	3.2	15	J	µg/L	10	2/16/2018 9:39:00 AM	R49200
Surr: 1,2-Dichloroethane-d4	78.6	0	70-130		%Rec	10	2/16/2018 9:39:00 AM	R49200
Surr: 4-Bromofluorobenzene	76.1	0	70-130		%Rec	10	2/16/2018 9:39:00 AM	R49200
Surr: Dibromofluoromethane	86.6	0	70-130		%Rec	10	2/16/2018 9:39:00 AM	R49200
Surr: Toluene-d8	84.5	0	70-130		%Rec	10	2/16/2018 9:39:00 AM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	1.1	0.097	0.50	D	mg/L	10	2/15/2018 1:35:34 PM	W49166

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 and EP-2
Project: 1st QTR Sampling 2018 Outfall
Collection Date: 2/12/2018 1:25:00 PM
Lab ID: 1802816-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Surr: BFB	115	0	70-130	D	%Rec	10	2/15/2018 1:35:34 PM	W49166
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	2380	59.1	100	*D	mg/L	1	2/18/2018 5:59:00 PM	36552

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	1360		20.0	2	02/15/2018 23:02	WG1074062

WG1074062

Wet Chemistry by Method 410.4

QUALITY CONTROL SUMMARY

L970464-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3286792-1 02/15/18 22:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		3	10.0

L970242-01 Original Sample (OS) • Duplicate (DUP)

(OS) L970242-01 02/15/18 22:56 • (DUP) R3286792-4 02/15/18 22:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	243	242	1	0.338		20

L970544-01 Original Sample (OS) • Duplicate (DUP)

(OS) L970544-01 02/15/18 23:04 • (DUP) R3286792-7 02/15/18 23:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	15.3	15.5	1	1.54		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3286792-2 02/15/18 22:56 • (LCSD) R3286792-3 02/15/18 22:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
COD	242	241	239	99.7	98.9	90-110			0.807	20

L970409-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L970409-01 02/15/18 22:59 • (MS) R3286792-5 02/15/18 22:59 • (MSD) R3286792-6 02/15/18 22:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	400	502	847	846	86.3	85.9	1	80-120			0.169	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID	**LCS-36547**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**LCSW**	Batch ID:	**36547**		RunNo:	**49189**				
Prep Date:	**2/15/2018**	Analysis Date:	**2/16/2018**		SeqNo:	**1586413**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	92.3	135			
Surr: DNOP	0.53		0.5000		105	77.5	161			

Sample ID	**MB-36547**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**PBW**	Batch ID:	**36547**		RunNo:	**49189**				
Prep Date:	**2/15/2018**	Analysis Date:	**2/16/2018**		SeqNo:	**1586415**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		104	77.5	161			

Sample ID	**1802816-001EMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**STP-1 and EP-2**	Batch ID:	**36547**		RunNo:	**49189**				
Prep Date:	**2/15/2018**	Analysis Date:	**2/16/2018**		SeqNo:	**1587072**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	67	1.0	5.000	61.14	119	83.3	151			
Surr: DNOP	0.51		0.5000		101	77.5	161			

Sample ID	**1802816-001EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**STP-1 and EP-2**	Batch ID:	**36547**		RunNo:	**49189**				
Prep Date:	**2/15/2018**	Analysis Date:	**2/16/2018**		SeqNo:	**1587073**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	1.0	5.000	61.14	83.6	83.3	151	2.71	20	
Surr: DNOP	0.51		0.5000		103	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586993** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	7.8		10.00		77.8	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.6	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.5	70	130			
Surr: Toluene-d8	8.5		10.00		85.1	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.18	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.7		10.00		76.9	70	130			
Surr: 4-Bromofluorobenzene	7.6		10.00		76.3	70	130			
Surr: Dibromofluoromethane	8.5		10.00		84.7	70	130			
Surr: Toluene-d8	8.3		10.00		83.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID **MB-36526**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **36526**	RunNo: **49225**							
Prep Date: **2/14/2018**	Analysis Date: **2/19/2018**	SeqNo: **1587956**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--36526**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **36526**	RunNo: **49225**							
Prep Date: **2/14/2018**	Analysis Date: **2/19/2018**	SeqNo: **1587957**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-36526**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **36526**	RunNo: **49225**							
Prep Date: **2/14/2018**	Analysis Date: **2/19/2018**	SeqNo: **1587958**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	170	2.0	198.0	0	85.1	84.6	115.4			

Sample ID **LCSD-36526**	SampType: **LCSD**	TestCode: **SM5210B: BOD**							
Client ID: **LCSS02**	Batch ID: **36526**	RunNo: **49225**							
Prep Date: **2/14/2018**	Analysis Date: **2/19/2018**	SeqNo: **1587959**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	170	2.0	198.0	0	86.4	84.6	115.4	1.47	39.3	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID	**1802816-001ams**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**STP-1 and EP-2**	Batch ID:	**W49166**		RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585519**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	6.9	0.50	5.000	1.112	116	70	130				
Surr: BFB	110		100.0		105	70	130				

Sample ID	**1802816-001amsd**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**STP-1 and EP-2**	Batch ID:	**W49166**		RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585520**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	7.3	0.50	5.000	1.112	123	70	130	4.68	20		
Surr: BFB	110		100.0		108	70	130	0	0		

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**W49166**		RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585526**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	0.050									
Surr: BFB	12		10.00		119	70	130				

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**W49166**		RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585537**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	97.0	70	130				
Surr: BFB	10		10.00		104	70	130				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802816**

26-Feb-18

Client: Andeavor Gallup

Project: 1st QTR Sampling 2018 Outfall

Sample ID	**MB-36552**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**36552**	RunNo:	**49197**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/18/2018**	SeqNo:	**1586803**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-36552**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**36552**	RunNo:	**49197**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/18/2018**	SeqNo:	**1586804**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802816 | RcptNo: 1

Received By: **Sophia Campuzano** 2/14/2018 9:15:00 AM

Completed By: **Ashley Gallegos** 2/14/2018 10:26:59 AM

Reviewed By: DDS 2/14/18 @ 1110 (labeled by: sre 02/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: sre

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

16. Additional remarks: Custody seals present + intact 02/14/18 sre

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR SAMPLING 2018 (OUTFALL)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802816	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BOD	TDS	COD		Air Bubbles (Y or N)
2/12/18	1325	WATER	STP-1 TO EP-2	40 ML VOA-5	HCL	-001			✓							✓						
				250 ML AMBER-1	NEAT				✓													
				1 L PLASTIC-1	NEAT													✓				
				500 ML PLASTIC-1	NEAT														✓			
				500 ML PLASTIC-1	H_2SO_4															✓		

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/13/18	0700		Courier	02/14/18	0915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1360		20.0	2	02/15/2018 23:02	WG1074062

Method Blank (MB)

(MB) R3286792-1 02/15/18 22:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3	10.0

L970242-01 Original Sample (OS) • Duplicate (DUP)

(OS) L970242-01 02/15/18 22:56 • (DUP) R3286792-4 02/15/18 22:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	243	242	1	0.338		20

L970544-01 Original Sample (OS) • Duplicate (DUP)

(OS) L970544-01 02/15/18 23:04 • (DUP) R3286792-7 02/15/18 23:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	15.3	15.5	1	1.54		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3286792-2 02/15/18 22:56 • (LCSD) R3286792-3 02/15/18 22:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	241	239	99.7	98.9	90-110			0.807	20

L970409-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L970409-01 02/15/18 22:59 • (MS) R3286792-5 02/15/18 22:59 • (MSD) R3286792-6 02/15/18 22:59

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	502	847	846	86.3	85.9	1	80-120			0.169	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Tc
2 Ss
3 Cn
4 Sr
5 Qc
6 Gl
7 Al
8 Sc

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 14, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling MKTF OrderNo.: 1802818

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/16/2018 1:40:23 PM	36547
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/16/2018 1:40:23 PM	36547
Surr: DNOP	105	0	77.5-161		%Rec	1	2/16/2018 1:40:23 PM	36547
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	0.71	0.22	0.50		mg/L	5	2/14/2018 11:48:42 AM	R49150
Chloride	210	5.0	10		mg/L	20	2/14/2018 12:01:06 PM	R49150
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/14/2018 11:48:42 AM	R49150
Bromide	1.2	0.014	0.10		mg/L	1	2/22/2018 5:46:07 AM	A49315
Nitrogen, Nitrate (As N)	2.8	0.11	0.50		mg/L	5	2/14/2018 11:48:42 AM	R49150
Phosphorus, Orthophosphate (As P)	1.3	1.2	2.5	J	mg/L	5	2/14/2018 11:48:42 AM	R49150
Sulfate	220	1.9	10		mg/L	20	2/14/2018 12:01:06 PM	R49150
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.032	0.00099	0.0020		mg/L	1	2/14/2018 4:54:08 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 4:54:08 PM	A49128
Calcium	130	0.39	5.0		mg/L	5	2/15/2018 4:39:45 PM	A49169
Chromium	ND	0.0013	0.0060		mg/L	1	2/14/2018 4:54:08 PM	A49128
Copper	0.0034	0.0032	0.0060	J	mg/L	1	2/14/2018 4:54:08 PM	A49128
Iron	ND	0.016	0.020		mg/L	1	2/14/2018 4:54:08 PM	A49128
Magnesium	25	0.25	1.0		mg/L	1	2/14/2018 4:54:08 PM	A49128
Manganese	1.6	0.0020	0.010	*	mg/L	5	2/15/2018 4:39:45 PM	A49169
Potassium	0.49	0.11	1.0	J	mg/L	1	2/14/2018 4:54:08 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	2/15/2018 4:33:39 PM	A49169
Sodium	270	1.6	10		mg/L	10	2/15/2018 5:35:47 PM	A49169
Zinc	0.0057	0.0021	0.010	J	mg/L	1	2/14/2018 4:54:08 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.21	0.0010	0.0020		mg/L	1	2/28/2018 6:36:38 PM	36710
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 6:36:38 PM	36710
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 6:36:38 PM	36710
Copper	0.0053	0.0041	0.0060	J	mg/L	1	2/28/2018 6:36:38 PM	36710
Iron	2.9	0.051	0.10	*	mg/L	5	3/1/2018 5:30:58 PM	36710
Manganese	1.8	0.0055	0.010	*	mg/L	5	3/1/2018 5:30:58 PM	36710
Silver	0.0022	0.0012	0.0050	J	mg/L	1	2/28/2018 6:36:38 PM	36710
Zinc	0.0089	0.0033	0.010	J	mg/L	1	2/28/2018 6:36:38 PM	36710
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0039	0.0021	0.0050	J	mg/L	5	2/26/2018 7:41:50 PM	C49385
Lead	ND	0.00017	0.00050		mg/L	1	2/21/2018 10:38:40 PM	C49298
Selenium	0.0075	0.0038	0.0050		mg/L	5	2/26/2018 7:41:50 PM	C49385

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Uranium	0.029	0.00048	0.0025		mg/L	5	2/26/2018 7:41:50 PM	C49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0046	0.00041	0.0010		mg/L	1	2/27/2018 2:18:22 PM	36710
Lead	0.0036	0.00023	0.00050		mg/L	1	2/27/2018 2:18:22 PM	36710
Selenium	0.0058	0.0049	0.0050		mg/L	5	3/6/2018 5:28:37 PM	36710
Uranium	0.031	0.00034	0.0025	*	mg/L	5	2/28/2018 7:14:56 PM	36710
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00017	0.000037	0.00020	J	mg/L	1	2/27/2018 3:43:21 PM	36731
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Aniline	ND	3.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Benzoic acid	8.1	3.9	20	J	µg/L	1	3/1/2018 1:05:44 PM	36560
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 1:05:44 PM	36560
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 1:05:44 PM	36560
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 1:05:44 PM	36560
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Naphthalene	ND	2.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 1:05:44 PM	36560
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 1:05:44 PM	36560
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 1:05:44 PM	36560
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Phenol	ND	3.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 1:05:44 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 1:05:44 PM	36560
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 1:05:44 PM	36560
Surr: 2-Fluorophenol	52.5	0	15-114		%Rec	1	3/1/2018 1:05:44 PM	36560
Surr: Phenol-d5	40.4	0	15-97.9		%Rec	1	3/1/2018 1:05:44 PM	36560
Surr: 2,4,6-Tribromophenol	88.8	0	15-161		%Rec	1	3/1/2018 1:05:44 PM	36560
Surr: Nitrobenzene-d5	77.7	0	29.3-120		%Rec	1	3/1/2018 1:05:44 PM	36560
Surr: 2-Fluorobiphenyl	78.4	0	17.5-116		%Rec	1	3/1/2018 1:05:44 PM	36560
Surr: 4-Terphenyl-d14	61.6	0	21-92.2		%Rec	1	3/1/2018 1:05:44 PM	36560
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.18	0.062	1.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
Toluene	0.19	0.064	1.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
Ethylbenzene	0.13	0.093	1.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
Methyl tert-butyl ether (MTBE)	1.0	0.24	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2,4-Trimethylbenzene	0.15	0.11	1.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Naphthalene	ND	0.11	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1-Methylnaphthalene	0.53	0.16	4.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
2-Methylnaphthalene	0.55	0.15	4.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
Acetone	ND	0.82	10		µg/L	1	2/16/2018 10:03:00 AM	R49200
Bromobenzene	ND	0.14	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Bromoform	ND	0.21	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Bromomethane	ND	0.26	3.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
2-Butanone	ND	1.1	10		µg/L	1	2/16/2018 10:03:00 AM	R49200
Carbon disulfide	ND	0.40	10		µg/L	1	2/16/2018 10:03:00 AM	R49200
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Chloroethane	ND	0.23	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Chloroform	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Chloromethane	ND	0.29	3.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
2-Hexanone	ND	0.66	10		µg/L	1	2/16/2018 10:03:00 AM	R49200
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/16/2018 10:03:00 AM	R49200
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Styrene	ND	0.16	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Tetrachloroethene (PCE)	0.15	0.13	1.0	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/16/2018 10:03:00 AM	R49200
Xylenes, Total	0.57	0.32	1.5	J	µg/L	1	2/16/2018 10:03:00 AM	R49200
Surr: 1,2-Dichloroethane-d4	79.4	0	70-130		%Rec	1	2/16/2018 10:03:00 AM	R49200
Surr: 4-Bromofluorobenzene	77.6	0	70-130		%Rec	1	2/16/2018 10:03:00 AM	R49200
Surr: Dibromofluoromethane	86.3	0	70-130		%Rec	1	2/16/2018 10:03:00 AM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date: 2/12/2018 2:55:00 PM
Lab ID: 1802818-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	83.7	0	70-130		%Rec	1	2/16/2018 10:03:00 AM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.015	0.0097	0.050	J	mg/L	1	2/16/2018 2:34:26 PM	W49191
Surr: BFB	120	0	70-130		%Rec	1	2/16/2018 2:34:26 PM	W49191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802818-002 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Toluene	ND	0.064	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Naphthalene	ND	0.11	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Acetone	ND	0.82	10		µg/L	1	2/16/2018 10:27:00 AM	R49200
Bromobenzene	ND	0.14	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Bromoform	ND	0.21	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Bromomethane	ND	0.26	3.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
2-Butanone	ND	1.1	10		µg/L	1	2/16/2018 10:27:00 AM	R49200
Carbon disulfide	ND	0.40	10		µg/L	1	2/16/2018 10:27:00 AM	R49200
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Chloroethane	ND	0.23	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Chloroform	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Chloromethane	ND	0.29	3.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Dibromomethane	ND	0.091	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1802818-002 **Matrix:** AQUEOUS **Received Date:** 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
2-Hexanone	ND	0.66	10		µg/L	1	2/16/2018 10:27:00 AM	R49200
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/16/2018 10:27:00 AM	R49200
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Styrene	ND	0.16	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/16/2018 10:27:00 AM	R49200
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/16/2018 10:27:00 AM	R49200
Surr: 1,2-Dichloroethane-d4	80.0	0	70-130		%Rec	1	2/16/2018 10:27:00 AM	R49200
Surr: 4-Bromofluorobenzene	75.7	0	70-130		%Rec	1	2/16/2018 10:27:00 AM	R49200
Surr: Dibromofluoromethane	88.4	0	70-130		%Rec	1	2/16/2018 10:27:00 AM	R49200
Surr: Toluene-d8	84.3	0	70-130		%Rec	1	2/16/2018 10:27:00 AM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.012	0.0097	0.050	J	mg/L	1	2/16/2018 3:20:31 PM	W49191
Surr: BFB	115	0	70-130		%Rec	1	2/16/2018 3:20:31 PM	W49191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0059	0.0060	0.006000	0	98.2	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.2	50	150			J
Potassium	0.51	1.0	0.5000	0	101	50	150			J
Zinc	0.0041	0.010	0.005000	0	81.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	47	1.0	50.00	0	94.6	85	115			
Potassium	46	1.0	50.00	0	92.0	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**A49169**	RunNo:	**49169**
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**A49169**	RunNo:	**49169**
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585687** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.45	1.0	0.5000	0	89.9	50	150			J
Manganese	0.0019	0.0020	0.002000	0	95.5	50	150			J
Silver	0.0030	0.0050	0.005000	0	59.4	50	150			J
Sodium	0.45	1.0	0.5000	0	90.1	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A49169**	RunNo:	**49169**
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	47	1.0	50.00	0	94.7	85	115			
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	48	1.0	50.00	0	95.3	85	115			

Sample ID	**1802818-001EMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**MKTF-38**	Batch ID:	**A49169**	RunNo:	**49169**
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.0	70	130			

Sample ID	**1802818-001EMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**MKTF-38**	Batch ID:	**A49169**	RunNo:	**49169**
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	99.2	70	130	2.24	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**1802818-001EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-38**	Batch ID:	**A49169**		RunNo:	**49169**				
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585736**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	127.0	97.0	70	130			
Manganese	4.1	0.010	2.500	1.648	99.9	70	130			

Sample ID	**1802818-001EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-38**	Batch ID:	**A49169**		RunNo:	**49169**				
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585737**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	360	5.0	250.0	127.0	92.7	70	130	2.95	20	
Manganese	4.1	0.010	2.500	1.648	96.7	70	130	1.95	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB-36710**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.00066	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-36710**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	98.2	85	115			

Sample ID **LLLCS-36710**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0023	0.0020	0.002000	0	114	50	150			
Cadmium	0.0024	0.0020	0.002000	0	120	50	150			
Chromium	0.0055	0.0060	0.006000	0	91.8	50	150			J
Copper	0.0060	0.0060	0.006000	0	99.5	50	150			J
Iron	0.025	0.020	0.02000	0	123	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Silver	0.0049	0.0050	0.005000	0	98.6	50	150			J
Zinc	0.0055	0.010	0.005000	0	110	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591444** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	97.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591446** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	95.7	85	115			

Sample ID **1802818-001EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **C49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	102	70	130			

Sample ID **1802818-001EMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-38**	Batch ID: **C49298**	RunNo: **49298**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	102	70	130	0.418	20	

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595035**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	94.1	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.7	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595036**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.9	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID	**1802818-001EMSLL**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-38**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595041**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.003896	95.7	70	130			
Selenium	0.12	0.0050	0.1250	0.007480	93.7	70	130			
Uranium	0.094	0.0025	0.06250	0.02932	103	70	130			

Sample ID	**1802818-001EMSDL**	SampType:	**MSD**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-38**	Batch ID:	**C49385**	RunNo:	**49385**					
Prep Date:		Analysis Date:	**2/26/2018**	SeqNo:	**1595042**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.003896	95.7	70	130	0.0581	20	
Selenium	0.12	0.0050	0.1250	0.007480	93.8	70	130	0.0404	20	
Uranium	0.093	0.0025	0.06250	0.02932	102	70	130	0.578	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-36710**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595823**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36710**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595824**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00054	0.0010	0.001000	0	54.2	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Sample ID	**MSLCS-36710**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595825**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.0	85	115			
Lead	0.012	0.00050	0.01250	0	95.1	85	115			
Uranium	0.012	0.00050	0.01250	0	94.9	85	115			

Sample ID	**MB-36710**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36710**	RunNo:	**49509**					
Prep Date:	**2/26/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600621**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36710**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36710**	RunNo:	**49509**					
Prep Date:	**2/26/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600622**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00084	0.0010	0.001000	0	83.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MSLCS-36710**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36710**	RunNo:	**49509**					
Prep Date:	**2/26/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600623**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID	**MB-36731**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36731**	RunNo:	**49431**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595758**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000096	0.00020								J

Sample ID	**LCS-36731**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36731**	RunNo:	**49431**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595759**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49150**	RunNo: **49150**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49150**	RunNo: **49150**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584845** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.7	0.50	5.000	0	93.9	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.6	0.50	10.00	0	96.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49315**	RunNo: **49315**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1591624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A49315**	RunNo: **49315**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1591625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.5	0.10	2.500	0	98.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **LCS-36547**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36547**	RunNo: **49189**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	92.3	135			
Surr: DNOP	0.53		0.5000		105	77.5	161			

Sample ID **MB-36547**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36547**	RunNo: **49189**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		104	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586993** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	7.8		10.00		77.8	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.6	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.5	70	130			
Surr: Toluene-d8	8.5		10.00		85.1	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.18	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.7		10.00		76.9	70	130			
Surr: 4-Bromofluorobenzene	7.6		10.00		76.3	70	130			
Surr: Dibromofluoromethane	8.5		10.00		84.7	70	130			
Surr: Toluene-d8	8.3		10.00		83.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **1802818-001cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-38** Batch ID: **36560** RunNo: **49495**

Prep Date: **2/16/2018** Analysis Date: **3/1/2018** SeqNo: **1599035** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	67.8	15	123			
4-Chloro-3-methylphenol	120	10	200.0	0	60.6	26.6	118			
2-Chlorophenol	120	10	200.0	0	59.9	15	120			
1,4-Dichlorobenzene	56	10	100.0	0	56.1	19	108			
2,4-Dinitrotoluene	72	10	100.0	0	71.9	27.8	103			
N-Nitrosodi-n-propylamine	70	10	100.0	0	70.2	32.3	126			
4-Nitrophenol	100	10	200.0	0	51.7	15	72.1			
Pentachlorophenol	140	20	200.0	0	67.7	15	114			
Phenol	43	10	200.0	0	21.7	15	67.5			
Pyrene	69	10	100.0	0	68.7	31.2	112			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.2	22.1	123			
Surr: 2-Fluorophenol	67		200.0		33.7	15	114			
Surr: Phenol-d5	45		200.0		22.3	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		75.0	15	161			
Surr: Nitrobenzene-d5	71		100.0		71.3	29.3	120			
Surr: 2-Fluorobiphenyl	68		100.0		67.7	17.5	116			
Surr: 4-Terphenyl-d14	59		100.0		58.7	21	92.2			

Sample ID **1802818-001cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **MKTF-38** Batch ID: **36560** RunNo: **49495**

Prep Date: **2/16/2018** Analysis Date: **3/1/2018** SeqNo: **1599036** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	81	10	100.0	0	81.5	15	123	18.3	30.5	
4-Chloro-3-methylphenol	170	10	200.0	0	86.0	26.6	118	34.7	50	
2-Chlorophenol	150	10	200.0	0	73.0	15	120	19.6	36.3	
1,4-Dichlorobenzene	63	10	100.0	0	63.4	19	108	12.2	42.1	
2,4-Dinitrotoluene	81	10	100.0	0	81.0	27.8	103	11.9	28.5	
N-Nitrosodi-n-propylamine	75	10	100.0	0	74.9	32.3	126	6.59	25.4	
4-Nitrophenol	60	10	200.0	0	29.8	15	72.1	53.6	50	R
Pentachlorophenol	140	20	200.0	0	70.1	15	114	3.54	50	
Phenol	79	10	200.0	0	39.5	15	67.5	58.0	46.1	R
Pyrene	78	10	100.0	0	77.9	31.2	112	12.6	34.3	
1,2,4-Trichlorobenzene	79	10	100.0	0	78.6	22.1	123	18.6	43.6	
Surr: 2-Fluorophenol	100		200.0		50.0	15	114	0	0	
Surr: Phenol-d5	76		200.0		38.2	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		83.9	15	161	0	0	
Surr: Nitrobenzene-d5	80		100.0		79.9	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		73.4	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **1802818-001cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-38**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599036** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	80		100.0		79.7	21	92.2	0	0	

Sample ID **lcs-36560**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	90	10	100.0	0	90.2	39.7	103			
4-Chloro-3-methylphenol	200	10	200.0	0	98.3	40.5	108			
2-Chlorophenol	170	10	200.0	0	86.6	35	103			
1,4-Dichlorobenzene	76	10	100.0	0	75.8	24.7	93.7			
2,4-Dinitrotoluene	88	10	100.0	0	87.7	35.6	91.4			
N-Nitrosodi-n-propylamine	94	10	100.0	0	93.8	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	160	20	200.0	0	80.7	25.3	98.5			
Phenol	130	10	200.0	0	64.1	20.9	75.1			
Pyrene	89	10	100.0	0	89.0	45.6	108			
1,2,4-Trichlorobenzene	87	10	100.0	0	87.0	30.3	106			
Surr: 2-Fluorophenol	150		200.0		75.8	15	114			
Surr: Phenol-d5	130		200.0		66.4	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		93.8	15	161			
Surr: Nitrobenzene-d5	94		100.0		94.4	29.3	120			
Surr: 2-Fluorobiphenyl	89		100.0		89.5	17.5	116			
Surr: 4-Terphenyl-d14	62		100.0		62.4	21	92.2			

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	6.1	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**	
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		53.9	15	114			
Surr: Phenol-d5	80		200.0		40.0	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.1	15	161			
Surr: Nitrobenzene-d5	77		100.0		77.0	29.3	120			
Surr: 2-Fluorobiphenyl	70		100.0		70.0	17.5	116			
Surr: 4-Terphenyl-d14	58		100.0		57.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802818**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling MKTF

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W49166**	RunNo: **49166**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585526** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	12		10.00		119	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W49166**	RunNo: **49166**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585537** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	10		10.00		104	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W49191**	RunNo: **49191**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587870** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		113	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W49191**	RunNo: **49191**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587871** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.6	70	130			
Surr: BFB	11		10.00		107	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802818 | RcptNo: 1

Received By: Sophia Campuzano 2/14/2018 9:15:00 AM

Completed By: Ashley Gallegos 2/14/2018 10:31:21 AM

Reviewed By: DDS 2/14/18 Labeled by: SRE 02/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 3 (≤2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? N C
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SRE

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: Custody seals present + intact 02/14/18 SRE

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/12/18	1455	WATER	MKTF-38	40 ML VOA-5	HCL	-001			✓							✓						
				1 L AMBER-2	NEAT												✓					
				250 ML AMBER-1	NEAT				✓													
				250ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
	↓			125 ML PLASTIC-1	NEAT														✓			
↓	—	WATER	TRIP BLANK	40 ML VOA-3 TP	HCL	-002										✓						

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/13/18	0700		courier	02/14/18	0915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 28, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW Sampling API OrderNo.: 1802819

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1802819**
Date Reported: **2/28/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018 10:25:00 AM
Lab ID: 1802819-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.5	0.63	1.0		mg/L	1	2/16/2018 2:35:14 PM	36547
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/16/2018 2:35:14 PM	36547
Surr: DNOP	105	0	77.5-161		%Rec	1	2/16/2018 2:35:14 PM	36547
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.21	0.00099	0.0020		mg/L	1	2/14/2018 4:56:19 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 4:56:19 PM	A49128
Chromium	0.048	0.0013	0.0060		mg/L	1	2/14/2018 4:56:19 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 4:56:19 PM	A49128
Iron	0.041	0.016	0.020		mg/L	1	2/14/2018 4:56:19 PM	A49128
Manganese	0.53	0.00039	0.0020	*	mg/L	1	2/14/2018 4:56:19 PM	A49128
Silver	ND	0.0018	0.0050		mg/L	1	2/15/2018 3:09:04 PM	A49169
Zinc	0.010	0.0021	0.010		mg/L	1	2/14/2018 4:56:19 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.22	0.0010	0.0020		mg/L	1	2/16/2018 3:24:14 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:24:14 PM	36554
Chromium	0.087	0.0018	0.0060		mg/L	1	2/16/2018 3:24:14 PM	36554
Copper	0.0043	0.0041	0.0060	J	mg/L	1	2/16/2018 3:24:14 PM	36554
Iron	0.97	0.010	0.020	*	mg/L	1	2/16/2018 3:24:14 PM	36554
Manganese	0.54	0.0011	0.0020	*	mg/L	1	2/16/2018 3:24:14 PM	36554
Silver	0.0024	0.0012	0.0050	J	mg/L	1	2/16/2018 3:24:14 PM	36554
Zinc	0.027	0.0033	0.010		mg/L	1	2/16/2018 3:24:14 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	ND	0.00042	0.0010		mg/L	1	2/16/2018 11:17:42 PM	E49190
Lead	ND	0.00017	0.00050		mg/L	1	2/16/2018 11:17:42 PM	E49190
Selenium	ND	0.00076	0.0010		mg/L	1	2/20/2018 5:16:24 PM	B49267
Uranium	ND	0.000096	0.00050		mg/L	1	2/16/2018 11:17:42 PM	E49190
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	2/17/2018 12:53:54 PM	36554
Lead	0.00035	0.00023	0.00050	J	mg/L	1	2/17/2018 12:53:54 PM	36554
Selenium	ND	0.00098	0.0010		mg/L	1	2/19/2018 12:13:51 PM	36554
Uranium	ND	0.000068	0.00050		mg/L	1	2/17/2018 12:53:54 PM	36554
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1900	6.2	100		µg/L	100	2/16/2018 10:50:00 AM	R49200
Toluene	47	0.64	10		µg/L	10	2/16/2018 11:14:00 AM	R49200
Ethylbenzene	290	0.93	10		µg/L	10	2/16/2018 11:14:00 AM	R49200
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	2/16/2018 11:14:00 AM	R49200
1,2,4-Trimethylbenzene	25	1.1	10		µg/L	10	2/16/2018 11:14:00 AM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018 10:25:00 AM
Lab ID: 1802819-001
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3,5-Trimethylbenzene	110	0.87	10		µg/L	10	2/16/2018 11:14:00 AM	R49200
Xylenes, Total	80	3.2	15		µg/L	10	2/16/2018 11:14:00 AM	R49200
Surr: 1,2-Dichloroethane-d4	78.3	0	70-130		%Rec	10	2/16/2018 11:14:00 AM	R49200
Surr: 4-Bromofluorobenzene	76.9	0	70-130		%Rec	10	2/16/2018 11:14:00 AM	R49200
Surr: Dibromofluoromethane	83.8	0	70-130		%Rec	10	2/16/2018 11:14:00 AM	R49200
Surr: Toluene-d8	85.5	0	70-130		%Rec	10	2/16/2018 11:14:00 AM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	7.9	0.097	0.50		mg/L	10	2/15/2018 3:30:28 PM	W49166
Surr: BFB	116	0	70-130		%Rec	10	2/15/2018 3:30:28 PM	W49166

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018 11:10:00 AM
Lab ID: 1802819-002
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	7.6	0.63	1.0		mg/L	1	2/16/2018 3:03:03 PM	36547
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/16/2018 3:03:03 PM	36547
Surr: DNOP	116	0	77.5-161		%Rec	1	2/16/2018 3:03:03 PM	36547
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.086	0.00099	0.0020		mg/L	1	2/14/2018 4:58:24 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 4:58:24 PM	A49128
Chromium	0.37	0.0013	0.0060	*	mg/L	1	2/14/2018 4:58:24 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 4:58:24 PM	A49128
Iron	0.19	0.016	0.020		mg/L	1	2/14/2018 4:58:24 PM	A49128
Manganese	1.6	0.0020	0.010	*	mg/L	5	2/15/2018 5:05:41 PM	A49169
Silver	0.012	0.0018	0.0050		mg/L	1	2/14/2018 4:58:24 PM	A49128
Zinc	0.040	0.0021	0.010		mg/L	1	2/14/2018 4:58:24 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.10	0.0010	0.0020		mg/L	1	2/16/2018 3:26:09 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:26:09 PM	36554
Chromium	0.43	0.0018	0.0060	*	mg/L	1	2/16/2018 3:26:09 PM	36554
Copper	0.0066	0.0041	0.0060		mg/L	1	2/16/2018 3:26:09 PM	36554
Iron	1.5	0.051	0.10	*	mg/L	5	2/20/2018 8:52:58 PM	36554
Manganese	2.1	0.0055	0.010	*	mg/L	5	2/20/2018 8:52:58 PM	36554
Silver	0.011	0.0012	0.0050		mg/L	1	2/16/2018 3:26:09 PM	36554
Zinc	0.095	0.0033	0.010		mg/L	1	2/16/2018 3:26:09 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	2/19/2018 8:28:12 PM	B49231
Lead	ND	0.00087	0.0025		mg/L	5	2/19/2018 8:28:12 PM	B49231
Selenium	ND	0.0038	0.0050		mg/L	5	2/20/2018 5:21:17 PM	B49267
Uranium	0.00097	0.00048	0.0025	J	mg/L	5	2/19/2018 8:28:12 PM	B49231
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0034	0.00041	0.0010		mg/L	1	2/17/2018 12:58:38 PM	36554
Lead	0.00085	0.00023	0.00050		mg/L	1	2/17/2018 12:58:38 PM	36554
Selenium	0.0030	0.00098	0.0010		mg/L	1	2/19/2018 12:18:46 PM	36554
Uranium	0.0013	0.000068	0.00050		mg/L	1	2/17/2018 12:58:38 PM	36554
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1400	6.2	100		µg/L	100	2/16/2018 11:38:00 AM	R49200
Toluene	130	0.64	10		µg/L	10	2/16/2018 12:01:00 PM	R49200
Ethylbenzene	42	0.93	10		µg/L	10	2/16/2018 12:01:00 PM	R49200
Methyl tert-butyl ether (MTBE)	5.6	2.4	10	J	µg/L	10	2/16/2018 12:01:00 PM	R49200
1,2,4-Trimethylbenzene	2.9	1.1	10	J	µg/L	10	2/16/2018 12:01:00 PM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018 11:10:00 AM
Lab ID: 1802819-002
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3,5-Trimethylbenzene	1.6	0.87	10	J	µg/L	10	2/16/2018 12:01:00 PM	R49200
Xylenes, Total	74	3.2	15		µg/L	10	2/16/2018 12:01:00 PM	R49200
Surr: 1,2-Dichloroethane-d4	78.8	0	70-130		%Rec	10	2/16/2018 12:01:00 PM	R49200
Surr: 4-Bromofluorobenzene	77.7	0	70-130		%Rec	10	2/16/2018 12:01:00 PM	R49200
Surr: Dibromofluoromethane	85.1	0	70-130		%Rec	10	2/16/2018 12:01:00 PM	R49200
Surr: Toluene-d8	85.0	0	70-130		%Rec	10	2/16/2018 12:01:00 PM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	5.0	0.097	0.50		mg/L	10	2/15/2018 3:53:31 PM	W49166
Surr: BFB	118	0	70-130		%Rec	10	2/15/2018 3:53:31 PM	W49166

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018
Lab ID: 1802819-003
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.9	0.63	1.0		mg/L	1	2/16/2018 3:30:52 PM	36547
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/16/2018 3:30:52 PM	36547
Surr: DNOP	106	0	77.5-161		%Rec	1	2/16/2018 3:30:52 PM	36547
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.21	0.00099	0.0020		mg/L	1	2/14/2018 5:00:27 PM	A49128
Cadmium	ND	0.0010	0.0020		mg/L	1	2/14/2018 5:00:27 PM	A49128
Chromium	0.049	0.0013	0.0060		mg/L	1	2/14/2018 5:00:27 PM	A49128
Copper	ND	0.0032	0.0060		mg/L	1	2/14/2018 5:00:27 PM	A49128
Iron	0.055	0.016	0.020		mg/L	1	2/14/2018 5:00:27 PM	A49128
Manganese	0.53	0.00039	0.0020	*	mg/L	1	2/14/2018 5:00:27 PM	A49128
Silver	0.0031	0.0018	0.0050	J	mg/L	1	2/14/2018 5:00:27 PM	A49128
Zinc	0.0090	0.0021	0.010	J	mg/L	1	2/14/2018 5:00:27 PM	A49128
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.21	0.0010	0.0020		mg/L	1	2/16/2018 3:30:07 PM	36554
Cadmium	ND	0.00058	0.0020		mg/L	1	2/16/2018 3:30:07 PM	36554
Chromium	0.087	0.0018	0.0060		mg/L	1	2/16/2018 3:30:07 PM	36554
Copper	ND	0.0041	0.0060		mg/L	1	2/16/2018 3:30:07 PM	36554
Iron	0.98	0.010	0.020	*	mg/L	1	2/16/2018 3:30:07 PM	36554
Manganese	0.53	0.0011	0.0020	*	mg/L	1	2/16/2018 3:30:07 PM	36554
Silver	0.0023	0.0012	0.0050	J	mg/L	1	2/16/2018 3:30:07 PM	36554
Zinc	0.027	0.0033	0.010		mg/L	1	2/16/2018 3:30:07 PM	36554
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	2/19/2018 8:33:07 PM	B49231
Lead	ND	0.00017	0.00050		mg/L	1	2/20/2018 5:26:11 PM	B49267
Selenium	ND	0.00076	0.0010		mg/L	1	2/20/2018 5:26:11 PM	B49267
Uranium	ND	0.000096	0.00050		mg/L	1	2/20/2018 5:26:11 PM	B49267
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	2/17/2018 1:03:22 PM	36554
Lead	0.00034	0.00023	0.00050	J	mg/L	1	2/17/2018 1:03:22 PM	36554
Selenium	ND	0.00098	0.0010		mg/L	1	2/19/2018 12:28:35 PM	36554
Uranium	ND	0.000068	0.00050		mg/L	1	2/17/2018 1:03:22 PM	36554
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1900	6.2	100		µg/L	100	2/16/2018 12:25:00 PM	R49200
Toluene	46	0.64	10		µg/L	10	2/16/2018 12:49:00 PM	R49200
Ethylbenzene	280	0.93	10		µg/L	10	2/16/2018 12:49:00 PM	R49200
Methyl tert-butyl ether (MTBE)	5.6	2.4	10	J	µg/L	10	2/16/2018 12:49:00 PM	R49200
1,2,4-Trimethylbenzene	25	1.1	10		µg/L	10	2/16/2018 12:49:00 PM	R49200

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 1st QTR 2018 GW Sampling API
Collection Date: 2/12/2018
Lab ID: 1802819-003
Matrix: AQUEOUS
Received Date: 2/14/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3,5-Trimethylbenzene	110	0.87	10		µg/L	10	2/16/2018 12:49:00 PM	R49200
Xylenes, Total	78	3.2	15		µg/L	10	2/16/2018 12:49:00 PM	R49200
Surr: 1,2-Dichloroethane-d4	79.4	0	70-130		%Rec	10	2/16/2018 12:49:00 PM	R49200
Surr: 4-Bromofluorobenzene	77.6	0	70-130		%Rec	10	2/16/2018 12:49:00 PM	R49200
Surr: Dibromofluoromethane	86.9	0	70-130		%Rec	10	2/16/2018 12:49:00 PM	R49200
Surr: Toluene-d8	86.5	0	70-130		%Rec	10	2/16/2018 12:49:00 PM	R49200
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	7.6	0.097	0.50		mg/L	10	2/15/2018 4:16:31 PM	W49166
Surr: BFB	113	0	70-130		%Rec	10	2/15/2018 4:16:31 PM	W49166

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0059	0.0060	0.006000	0	98.2	50	150			J
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.5	50	150			J
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J
Zinc	0.0041	0.010	0.005000	0	81.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49128**	RunNo: **49128**
Prep Date:	Analysis Date: **2/14/2018**	SeqNo: **1584161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585687** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.0019	0.0020	0.002000	0	95.5	50	150			J
Silver	0.0030	0.0050	0.005000	0	59.4	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **1802819-001CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EAST LDU**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585698** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.3	70	130			

Sample ID **1802819-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EAST LDU**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585699** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.098	0.0050	0.1000	0	98.3	70	130	0.0610	20	

Sample ID **1802819-002CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **WEST LDU**	Batch ID: **A49169**	RunNo: **49169**
Prep Date:	Analysis Date: **2/15/2018**	SeqNo: **1585749** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	4.2	0.010	2.500	1.636	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**1802819-002CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**WEST LDU**	Batch ID:	**A49169**		RunNo:	**49169**				
Prep Date:		Analysis Date:	**2/15/2018**		SeqNo:	**1585750**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	4.2	0.010	2.500	1.636	104	70	130	0.519	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **MB-36554**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36554**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	77.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	94.0	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.7	50	150			J
Copper	0.0061	0.0060	0.006000	0	101	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	99.0	50	150			J
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Zinc	0.0062	0.010	0.005000	0	124	50	150			J

Sample ID **LCS-36554**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36554**	RunNo: **49194**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1588521** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.57	0.020	0.5000	0	114	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.47	0.010	0.5000	0	95.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00076	0.0010	0.001000	0	75.7	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.8	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.4	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E49190**	RunNo: **49190**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586627** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.1	85	115			
Lead	0.012	0.00050	0.01250	0	94.2	85	115			
Uranium	0.011	0.00050	0.01250	0	91.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588371** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49231**	RunNo: **49231**
Prep Date:	Analysis Date: **2/19/2018**	SeqNo: **1588372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00073	0.0010	0.001000	0	73.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.8	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B49231**			RunNo: **49231**					
Prep Date:		Analysis Date: **2/19/2018**			SeqNo: **1588375**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	99.8	85	115			

Sample ID	**1802819-003CMSLL**	SampType: **MS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**DUP06**	Batch ID: **B49231**			RunNo: **49231**					
Prep Date:		Analysis Date: **2/19/2018**			SeqNo: **1588379**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.3	70	130			

Sample ID	**1802819-003CMSDL**	SampType: **MSD**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**DUP06**	Batch ID: **B49231**			RunNo: **49231**					
Prep Date:		Analysis Date: **2/19/2018**			SeqNo: **1588380**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.3	70	130	2.16	20	

Sample ID	**MB**	SampType: **MBLK**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B49267**			RunNo: **49267**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589547**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**LLLCS**	SampType: **LCSLL**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B49267**			RunNo: **49267**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589548**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	97.0	50	150			J
Selenium	0.00093	0.0010	0.001000	0	92.7	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.2	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B49267**		RunNo:	**49267**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589549**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	94.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			
Uranium	0.012	0.00050	0.01250	0	92.7	85	115			

Sample ID	**1802819-003CMSLL**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**DUP06**	Batch ID:	**B49267**		RunNo:	**49267**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589555**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	98.5	70	130			
Selenium	0.020	0.0010	0.02500	0	78.2	70	130			
Uranium	0.013	0.00050	0.01250	0	106	70	130			

Sample ID	**1802819-003CMSDL**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**DUP06**	Batch ID:	**B49267**		RunNo:	**49267**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589556**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	93.6	70	130	5.02	20	
Selenium	0.019	0.0010	0.02500	0	76.8	70	130	1.81	20	
Uranium	0.013	0.00050	0.01250	0	101	70	130	4.67	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**MB-36554**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586950**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36554**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586951**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00047	0.00050	0.0005000	0	94.8	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID	**MSLCS-36554**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36554**	RunNo:	**49199**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/17/2018**	SeqNo:	**1586952**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Uranium	0.012	0.00050	0.01250	0	98.1	85	115			

Sample ID	**MB-36554**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36554**	RunNo:	**49226**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/19/2018**	SeqNo:	**1588114**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLCS-36554**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36554**	RunNo:	**49226**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/19/2018**	SeqNo:	**1588116**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	88.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**MSLLLCS-36554**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36554**	RunNo:	**49226**					
Prep Date:	**2/15/2018**	Analysis Date:	**2/19/2018**	SeqNo:	**1588117**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00054	0.0010	0.001000	0	54.2	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **LCS-36547**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36547**	RunNo: **49189**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	92.3	135			
Surr: DNOP	0.53		0.5000		105	77.5	161			

Sample ID **MB-36547**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36547**	RunNo: **49189**
Prep Date: **2/15/2018**	Analysis Date: **2/16/2018**	SeqNo: **1586415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		104	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586993** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	7.8		10.00		77.8	70	130			
Surr: 4-Bromofluorobenzene	7.8		10.00		77.6	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.5	70	130			
Surr: Toluene-d8	8.5		10.00		85.1	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.18	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49200**	RunNo: **49200**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.7		10.00		76.9	70	130			
Surr: 4-Bromofluorobenzene	7.6		10.00		76.3	70	130			
Surr: Dibromofluoromethane	8.5		10.00		84.7	70	130			
Surr: Toluene-d8	8.3		10.00		83.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802819**

28-Feb-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling API

Sample ID	**rb**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**W49166**	RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585526**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	12		10.00		119	70	130			

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**W49166**	RunNo:	**49166**					
Prep Date:		Analysis Date:	**2/15/2018**	SeqNo:	**1585537**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	97.0	70	130			
Surr: BFB	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802819 | RcptNo: 1

Received By: **Sophia Campuzano** 2/14/2018 9:15:00 AM

Completed By: **Ashley Gallegos** 2/14/2018 10:36:21 AM

Reviewed By: DPS 2/14/18 labeled by: SKE 02/14/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? ~~Yes~~ ☑ SKE No ☑
8. Was preservative added to bottles? Yes ☑ SKE ~~No~~ ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
Adjusted? yes
Checked by: SKE

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks: Custody seals present & intact 02/14/18 SKE
For metals analysis: Added 0.5 mL HNO_3 to -0020 for acceptable pH. Held for 24 hrs prior to analysis. 02/14/18 @ 1100 SKE

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (API)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802819	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	Air Bubbles (Y or N)
2/12/18	1025	WATER	EAST LDU	40 ML VOA-5	HCL	-001	✓		✓										
				250 ML AMBER-1	NEAT				✓										
				250 ML PLASTIC-1	HNO_3													✓	
				125 ML PLASTIC-1	HNO_3													✓	
	1110	WATER	WEST LDU	40 ML VOA-5	HCL	-002	✓		✓										
				250 ML AMBER-1	NEAT				✓										
				250 ML PLASTIC-1	HNO3													✓	
				125 ML PLASTIC-1	HNO3													✓	
	—	WATER	DUP06	40 ML VOA-5	HCL	-003	✓		✓										
				250 ML AMBER-1	NEAT				✓										
				250 ML PLASTIC-1	HNO3													✓	
				125 ML PLASTIC-1	HNO3													✓	

Date: 2/13/18 Time: 0700 Relinquished by:

Received by: courier Date: 02/14/18 Time: 0915

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 14, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW SAMPLING (MKTF) OrderNo.: 1802938

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.0	0.63	1.0		mg/L	1	2/20/2018 6:03:21 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 6:03:21 PM	36596
Surr: DNOP	114	0	77.5-161		%Rec	1	2/20/2018 6:03:21 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.93	0.22	0.50		mg/L	5	2/16/2018 12:52:28 PM	R49185
Chloride	220	5.0	10		mg/L	20	2/16/2018 1:04:52 PM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 12:52:28 PM	R49185
Bromide	2.3	0.073	0.50		mg/L	5	3/2/2018 3:34:50 PM	R49522
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 12:52:28 PM	R49185
Phosphorus, Orthophosphate (As P)	2.2	1.2	2.5	J	mg/L	5	2/16/2018 12:52:28 PM	R49185
Sulfate	8.6	0.48	2.5		mg/L	5	2/16/2018 12:52:28 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.8	0.0049	0.010	*	mg/L	5	2/21/2018 7:38:12 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:11:23 PM	A49271
Calcium	120	0.39	5.0		mg/L	5	2/21/2018 7:38:12 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:11:23 PM	A49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 10:11:23 PM	A49271
Iron	1.9	0.082	0.10	*	mg/L	5	2/21/2018 7:38:12 PM	A49287
Magnesium	26	0.25	1.0		mg/L	1	2/20/2018 10:11:23 PM	A49271
Manganese	1.5	0.0020	0.010	*	mg/L	5	2/21/2018 7:38:12 PM	A49287
Potassium	0.63	0.11	1.0	J	mg/L	1	2/20/2018 10:11:23 PM	A49271
Silver	0.0024	0.0018	0.0050	J	mg/L	1	2/20/2018 10:11:23 PM	A49271
Sodium	340	0.82	5.0		mg/L	5	2/21/2018 7:38:12 PM	A49287
Zinc	0.0082	0.0021	0.010	J	mg/L	1	2/20/2018 10:11:23 PM	A49271
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.8	0.0050	0.010	*	mg/L	5	3/1/2018 5:49:26 PM	36710
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 6:44:59 PM	36710
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 6:44:59 PM	36710
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 6:44:59 PM	36710
Iron	5.2	0.10	0.20	*	mg/L	10	3/1/2018 5:51:04 PM	36710
Manganese	1.5	0.0055	0.010	*	mg/L	5	3/1/2018 5:49:26 PM	36710
Silver	0.0021	0.0012	0.0050	J	mg/L	1	2/28/2018 6:44:59 PM	36710
Zinc	ND	0.0033	0.010		mg/L	1	2/28/2018 6:44:59 PM	36710
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0084	0.020		mg/L	20	3/1/2018 6:37:37 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 9:30:09 PM	C49385
Selenium	ND	0.015	0.020		mg/L	20	3/1/2018 6:37:37 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0044	0.000096	0.00050		mg/L	1	2/26/2018 9:30:09 PM	C49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0069	0.0021	0.0050		mg/L	5	2/28/2018 7:19:52 PM	36710
Lead	0.00070	0.00023	0.00050		mg/L	1	2/27/2018 2:57:43 PM	36710
Selenium	0.0083	0.0049	0.0050		mg/L	5	3/2/2018 11:30:56 AM	36710
Uranium	0.0042	0.000068	0.00050		mg/L	1	2/27/2018 2:57:43 PM	36710
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 5:49:03 PM	36783
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.8	3.6	10	J	µg/L	1	3/1/2018 2:29:20 PM	36560
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Aniline	ND	3.1	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzoic acid	ND	3.9	20		µg/L	1	3/1/2018 2:29:20 PM	36560
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Carbazole	15	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 2:29:20 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 2:29:20 PM	36560
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 2:29:20 PM	36560
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4-Dimethylphenol	3.6	2.8	10	J	µg/L	1	3/1/2018 2:29:20 PM	36560
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Fluorene	6.9	4.0	10	J	µg/L	1	3/1/2018 2:29:20 PM	36560
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 2:29:20 PM	36560
1-Methylnaphthalene	150	3.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Methylnaphthalene	160	3.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 2:29:20 PM	36560
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Naphthalene	220	2.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 2:29:20 PM	36560
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 2:29:20 PM	36560
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 2:29:20 PM	36560
Phenanthrene	4.7	4.3	10	J	µg/L	1	3/1/2018 2:29:20 PM	36560
Phenol	6.6	3.1	10	J	µg/L	1	3/1/2018 2:29:20 PM	36560
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 2:29:20 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 2:29:20 PM	36560
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 2:29:20 PM	36560
Surr: 2-Fluorophenol	43.2	0	15-114		%Rec	1	3/1/2018 2:29:20 PM	36560
Surr: Phenol-d5	39.4	0	15-97.9		%Rec	1	3/1/2018 2:29:20 PM	36560
Surr: 2,4,6-Tribromophenol	75.6	0	15-161		%Rec	1	3/1/2018 2:29:20 PM	36560
Surr: Nitrobenzene-d5	75.4	0	29.3-120		%Rec	1	3/1/2018 2:29:20 PM	36560
Surr: 2-Fluorobiphenyl	75.2	0	17.5-116		%Rec	1	3/1/2018 2:29:20 PM	36560
Surr: 4-Terphenyl-d14	43.8	0	21-92.2		%Rec	1	3/1/2018 2:29:20 PM	36560
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	900	0.62	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Toluene	14	0.64	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Ethylbenzene	600	0.93	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Methyl tert-butyl ether (MTBE)	2000	2.4	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2,4-Trimethylbenzene	420	1.1	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,3,5-Trimethylbenzene	68	0.87	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Naphthalene	260	1.1	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
1-Methylnaphthalene	140	1.6	40		µg/L	10	2/22/2018 12:41:12 AM	W49304
2-Methylnaphthalene	120	1.5	40		µg/L	10	2/22/2018 12:41:12 AM	W49304
Acetone	ND	8.2	100		µg/L	10	2/22/2018 12:41:12 AM	W49304
Bromobenzene	ND	1.4	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Bromodichloromethane	ND	1.8	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Bromoform	ND	2.1	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Bromomethane	ND	2.6	30		µg/L	10	2/22/2018 12:41:12 AM	W49304
2-Butanone	ND	11	100		µg/L	10	2/22/2018 12:41:12 AM	W49304
Carbon disulfide	ND	4.0	100		µg/L	10	2/22/2018 12:41:12 AM	W49304
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Chlorobenzene	ND	1.1	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Chloroethane	ND	2.3	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
Chloroform	ND	4.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Chloromethane	ND	2.9	30		µg/L	10	2/22/2018 12:41:12 AM	W49304
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
cis-1,2-DCE	11	2.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
Dibromochloromethane	ND	0.72	10		µg/L	10	2/22/2018 12:41:12 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.91	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1-Dichloroethane	8.4	4.0	10	J	µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1-Dichloroethene	12	0.81	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
2-Hexanone	ND	6.6	100		µg/L	10	2/22/2018 12:41:12 AM	W49304
Isopropylbenzene	23	0.51	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
4-Isopropyltoluene	3.9	0.96	10	J	µg/L	10	2/22/2018 12:41:12 AM	W49304
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/22/2018 12:41:12 AM	W49304
Methylene Chloride	ND	1.1	30		µg/L	10	2/22/2018 12:41:12 AM	W49304
n-Butylbenzene	9.3	1.3	30	J	µg/L	10	2/22/2018 12:41:12 AM	W49304
n-Propylbenzene	48	0.74	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
sec-Butylbenzene	2.8	1.1	10	J	µg/L	10	2/22/2018 12:41:12 AM	W49304
Styrene	ND	1.6	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/22/2018 12:41:12 AM	W49304
Vinyl chloride	ND	1.8	10		µg/L	10	2/22/2018 12:41:12 AM	W49304
Xylenes, Total	710	3.2	15		µg/L	10	2/22/2018 12:41:12 AM	W49304
Surr: 1,2-Dichloroethane-d4	96.2	0	70-130		%Rec	10	2/22/2018 12:41:12 AM	W49304
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	10	2/22/2018 12:41:12 AM	W49304
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	10	2/22/2018 12:41:12 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:05:00 PM
Lab ID: 1802938-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	99.6	0	70-130		%Rec	10	2/22/2018 12:41:12 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	9.6	0.19	1.0		mg/L	20	2/20/2018 3:51:43 PM	G49265
Surr: BFB	96.2	0	70-130		%Rec	20	2/20/2018 3:51:43 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.6	0.63	1.0		mg/L	1	2/20/2018 7:22:49 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 7:22:49 PM	36596
Surr: DNOP	112	0	77.5-161		%Rec	1	2/20/2018 7:22:49 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/16/2018 1:17:17 PM	R49185
Chloride	390	12	25		mg/L	50	3/2/2018 4:00:33 PM	R49522
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 1:17:17 PM	R49185
Bromide	1.1	0.073	0.50		mg/L	5	3/2/2018 3:47:42 PM	R49522
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 1:17:17 PM	R49185
Phosphorus, Orthophosphate (As P)	3.3	1.2	2.5		mg/L	5	2/16/2018 1:17:17 PM	R49185
Sulfate	ND	0.48	2.5		mg/L	5	2/16/2018 1:17:17 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.8	0.0099	0.020	*	mg/L	10	2/21/2018 7:40:02 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/16/2018 5:03:48 PM	A49194
Calcium	150	0.39	5.0		mg/L	5	2/20/2018 10:18:39 PM	A49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/16/2018 5:03:48 PM	A49194
Copper	ND	0.0032	0.0060		mg/L	1	2/16/2018 5:03:48 PM	A49194
Iron	9.7	0.16	0.20	*	mg/L	10	2/21/2018 7:40:02 PM	A49287
Magnesium	36	0.25	1.0		mg/L	1	2/16/2018 5:03:48 PM	A49194
Manganese	3.7	0.0039	0.020	*	mg/L	10	2/21/2018 7:40:02 PM	A49287
Potassium	0.50	0.11	1.0	J	mg/L	1	2/16/2018 5:03:48 PM	A49194
Silver	0.0026	0.0018	0.0050	J	mg/L	1	2/16/2018 5:03:48 PM	A49194
Sodium	290	1.6	10		mg/L	10	2/21/2018 7:40:02 PM	A49287
Zinc	0.0078	0.0021	0.010	J	mg/L	1	2/16/2018 5:03:48 PM	A49194
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.5	0.0050	0.010	*	mg/L	5	3/1/2018 5:52:49 PM	36710
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 6:46:50 PM	36710
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 6:46:50 PM	36710
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 6:46:50 PM	36710
Iron	12	0.20	0.40	*	mg/L	20	3/1/2018 5:54:31 PM	36710
Manganese	3.6	0.0055	0.010	*	mg/L	5	3/1/2018 5:52:49 PM	36710
Silver	0.0025	0.0012	0.0050	J	mg/L	1	2/28/2018 6:46:50 PM	36710
Zinc	0.0050	0.0033	0.010	J	mg/L	1	2/28/2018 6:46:50 PM	36710
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Arsenic	0.0083	0.00042	0.0010		mg/L	1	2/26/2018 9:35:05 PM	C49385
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 9:35:05 PM	C49385
Selenium	0.0072	0.00076	0.0010		mg/L	1	2/26/2018 9:35:05 PM	C49385

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **JLF**	
Uranium	0.00030	0.000096	0.00050	J	mg/L	1	2/26/2018 9:35:05 PM	C49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0080	0.00041	0.0010		mg/L	1	2/27/2018 3:02:37 PM	36710
Lead	0.0013	0.00023	0.00050		mg/L	1	2/27/2018 3:02:37 PM	36710
Selenium	0.0034	0.00098	0.0010		mg/L	1	3/2/2018 11:45:41 AM	36710
Uranium	0.00035	0.000068	0.00050	J	mg/L	1	2/27/2018 3:02:37 PM	36710
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 5:51:19 PM	36783
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Aniline	ND	3.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzoic acid	22	3.9	20		µg/L	1	3/1/2018 2:57:15 PM	36560
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 2:57:15 PM	36560
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4-Dimethylphenol	25	2.8	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 2:57:15 PM	36560
1-Methylnaphthalene	53	3.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Methylnaphthalene	82	3.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Methylphenol	36	3.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
3+4-Methylphenol	37	3.2	10		µg/L	1	3/1/2018 2:57:15 PM	36560
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Naphthalene	150	2.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 2:57:15 PM	36560
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 2:57:15 PM	36560
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 2:57:15 PM	36560
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Phenol	42	3.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 2:57:15 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 2:57:15 PM	36560
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 2:57:15 PM	36560
Surr: 2-Fluorophenol	18.9	0	15-114		%Rec	1	3/1/2018 2:57:15 PM	36560
Surr: Phenol-d5	43.3	0	15-97.9		%Rec	1	3/1/2018 2:57:15 PM	36560
Surr: 2,4,6-Tribromophenol	87.4	0	15-161		%Rec	1	3/1/2018 2:57:15 PM	36560
Surr: Nitrobenzene-d5	77.8	0	29.3-120		%Rec	1	3/1/2018 2:57:15 PM	36560
Surr: 2-Fluorobiphenyl	82.8	0	17.5-116		%Rec	1	3/1/2018 2:57:15 PM	36560
Surr: 4-Terphenyl-d14	45.3	0	21-92.2		%Rec	1	3/1/2018 2:57:15 PM	36560
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	10000	31	500		µg/L	500	2/22/2018 2:08:01 AM	W49304
Toluene	3700	3.2	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Ethylbenzene	1800	4.7	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Methyl tert-butyl ether (MTBE)	14	12	50	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2,4-Trimethylbenzene	970	5.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,3,5-Trimethylbenzene	230	4.4	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Naphthalene	200	5.7	100		µg/L	50	2/22/2018 2:36:57 AM	W49304
1-Methylnaphthalene	67	8.0	200	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
2-Methylnaphthalene	83	7.6	200	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
Acetone	ND	41	500		µg/L	50	2/22/2018 2:36:57 AM	W49304
Bromobenzene	ND	7.0	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Bromodichloromethane	ND	8.8	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Bromoform	ND	11	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Bromomethane	ND	13	150		µg/L	50	2/22/2018 2:36:57 AM	W49304
2-Butanone	ND	57	500		µg/L	50	2/22/2018 2:36:57 AM	W49304
Carbon disulfide	ND	20	500		µg/L	50	2/22/2018 2:36:57 AM	W49304
Carbon Tetrachloride	ND	5.5	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Chlorobenzene	ND	5.3	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Chloroethane	65	12	100	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
Chloroform	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Chloromethane	ND	15	150		µg/L	50	2/22/2018 2:36:57 AM	W49304
2-Chlorotoluene	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
4-Chlorotoluene	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
cis-1,2-DCE	66	10	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	2/22/2018 2:36:57 AM	W49304
Dibromochloromethane	ND	3.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	4.5	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,4-Dichlorobenzene	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Dichlorodifluoromethane	ND	50	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1-Dichloroethane	ND	20	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1-Dichloroethene	ND	4.0	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2-Dichloropropane	ND	5.1	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,3-Dichloropropane	ND	8.4	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
2,2-Dichloropropane	ND	7.9	100		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1-Dichloropropene	ND	4.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Hexachlorobutadiene	ND	40	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
2-Hexanone	ND	33	500		µg/L	50	2/22/2018 2:36:57 AM	W49304
Isopropylbenzene	62	2.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
4-Isopropyltoluene	7.5	4.8	50	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
4-Methyl-2-pentanone	ND	35	500		µg/L	50	2/22/2018 2:36:57 AM	W49304
Methylene Chloride	ND	5.4	150		µg/L	50	2/22/2018 2:36:57 AM	W49304
n-Butylbenzene	22	6.5	150	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
n-Propylbenzene	130	3.7	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
sec-Butylbenzene	11	5.5	50	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
Styrene	ND	7.8	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
tert-Butylbenzene	ND	5.2	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	2/22/2018 2:36:57 AM	W49304
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
trans-1,2-DCE	ND	9.2	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
Trichlorofluoromethane	ND	9.1	50		µg/L	50	2/22/2018 2:36:57 AM	W49304
1,2,3-Trichloropropane	ND	19	100		µg/L	50	2/22/2018 2:36:57 AM	W49304
Vinyl chloride	18	8.9	50	J	µg/L	50	2/22/2018 2:36:57 AM	W49304
Xylenes, Total	8300	16	75		µg/L	50	2/22/2018 2:36:57 AM	W49304
Surr: 1,2-Dichloroethane-d4	96.1	0	70-130		%Rec	50	2/22/2018 2:36:57 AM	W49304
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	50	2/22/2018 2:36:57 AM	W49304
Surr: Dibromofluoromethane	98.0	0	70-130		%Rec	50	2/22/2018 2:36:57 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 2:55:00 PM
Lab ID: 1802938-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	99.6	0	70-130		%Rec	50	2/22/2018 2:36:57 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	74	0.97	5.0		mg/L	100	2/20/2018 5:00:45 PM	G49265
Surr: BFB	104	0	70-130		%Rec	100	2/20/2018 5:00:45 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.2	0.63	1.0		mg/L	1	2/20/2018 7:49:32 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 7:49:32 PM	36596
Surr: DNOP	116	0	77.5-161		%Rec	1	2/20/2018 7:49:32 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.40	0.22	0.50	J	mg/L	5	2/16/2018 1:42:06 PM	R49185
Chloride	220	5.0	10		mg/L	20	2/16/2018 1:54:31 PM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 1:42:06 PM	R49185
Bromide	1.4	0.073	0.50		mg/L	5	3/2/2018 4:13:25 PM	R49522
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 1:42:06 PM	R49185
Phosphorus, Orthophosphate (As P)	2.4	1.2	2.5	J	mg/L	5	2/16/2018 1:42:06 PM	R49185
Sulfate	27	0.48	2.5		mg/L	5	2/16/2018 1:42:06 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.52	0.00099	0.0020		mg/L	1	2/16/2018 5:09:13 PM	A49194
Cadmium	ND	0.0010	0.0020		mg/L	1	2/16/2018 5:09:13 PM	A49194
Calcium	140	0.39	5.0		mg/L	5	2/20/2018 10:24:00 PM	A49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/16/2018 5:09:13 PM	A49194
Copper	ND	0.0032	0.0060		mg/L	1	2/16/2018 5:09:13 PM	A49194
Iron	1.3	0.082	0.10	*	mg/L	5	2/20/2018 10:24:00 PM	A49271
Magnesium	28	0.25	1.0		mg/L	1	2/16/2018 5:09:13 PM	A49194
Manganese	4.0	0.0039	0.020	*	mg/L	10	2/20/2018 10:31:23 PM	A49271
Potassium	0.45	0.11	1.0	J	mg/L	1	2/16/2018 5:09:13 PM	A49194
Silver	0.0035	0.0018	0.0050	J	mg/L	1	2/16/2018 5:09:13 PM	A49194
Sodium	250	0.82	5.0		mg/L	5	2/20/2018 10:24:00 PM	A49271
Zinc	0.0080	0.0021	0.010	J	mg/L	1	2/16/2018 5:09:13 PM	A49194
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.50	0.0010	0.0020		mg/L	1	2/28/2018 6:48:46 PM	36710
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 6:48:46 PM	36710
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 6:48:46 PM	36710
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 6:48:46 PM	36710
Iron	2.3	0.051	0.10	*	mg/L	5	3/1/2018 5:56:15 PM	36710
Manganese	3.9	0.0055	0.010	*	mg/L	5	3/1/2018 5:56:15 PM	36710
Silver	0.0027	0.0012	0.0050	J	mg/L	1	2/28/2018 6:48:46 PM	36710
Zinc	ND	0.0033	0.010		mg/L	1	2/28/2018 6:48:46 PM	36710
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0025	0.0021	0.0050	J	mg/L	5	3/1/2018 6:45:49 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 9:54:46 PM	D49385
Selenium	0.0048	0.0038	0.0050	J	mg/L	5	3/1/2018 6:45:49 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0054	0.000096	0.00050		mg/L	1	2/26/2018 9:54:46 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0026	0.00041	0.0010		mg/L	1	2/28/2018 7:44:29 PM	36710
Lead	0.0012	0.00023	0.00050		mg/L	1	2/27/2018 3:07:32 PM	36710
Selenium	0.0041	0.00098	0.0010		mg/L	1	3/2/2018 11:50:36 AM	36710
Uranium	0.0053	0.000068	0.00050		mg/L	1	2/27/2018 3:07:32 PM	36710
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 5:53:36 PM	36783
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.8	3.6	10	J	µg/L	1	3/1/2018 3:25:08 PM	36560
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Aniline	ND	3.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzoic acid	ND	3.9	20		µg/L	1	3/1/2018 3:25:08 PM	36560
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Carbazole	13	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 3:25:08 PM	36560
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Fluorene	8.1	4.0	10	J	µg/L	1	3/1/2018 3:25:08 PM	36560
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 3:25:08 PM	36560
1-Methylnaphthalene	70	3.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 3:25:08 PM	36560
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Naphthalene	42	2.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 3:25:08 PM	36560
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 3:25:08 PM	36560
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 3:25:08 PM	36560
Phenanthrene	7.3	4.3	10	J	µg/L	1	3/1/2018 3:25:08 PM	36560
Phenol	14	3.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 3:25:08 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 3:25:08 PM	36560
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 3:25:08 PM	36560
Surr: 2-Fluorophenol	59.9	0	15-114		%Rec	1	3/1/2018 3:25:08 PM	36560
Surr: Phenol-d5	43.4	0	15-97.9		%Rec	1	3/1/2018 3:25:08 PM	36560
Surr: 2,4,6-Tribromophenol	91.6	0	15-161		%Rec	1	3/1/2018 3:25:08 PM	36560
Surr: Nitrobenzene-d5	86.3	0	29.3-120		%Rec	1	3/1/2018 3:25:08 PM	36560
Surr: 2-Fluorobiphenyl	85.8	0	17.5-116		%Rec	1	3/1/2018 3:25:08 PM	36560
Surr: 4-Terphenyl-d14	48.5	0	21-92.2		%Rec	1	3/1/2018 3:25:08 PM	36560
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2700	6.2	100		µg/L	100	2/22/2018 3:05:50 AM	W49304
Toluene	24	0.64	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Ethylbenzene	250	0.93	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Methyl tert-butyl ether (MTBE)	480	2.4	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2,4-Trimethylbenzene	86	1.1	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,3,5-Trimethylbenzene	1.3	0.87	10	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Naphthalene	50	1.1	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
1-Methylnaphthalene	64	1.6	40		µg/L	10	2/22/2018 3:34:42 AM	W49304
2-Methylnaphthalene	9.0	1.5	40	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
Acetone	ND	8.2	100		µg/L	10	2/22/2018 3:34:42 AM	W49304
Bromobenzene	ND	1.4	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Bromodichloromethane	ND	1.8	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Bromoform	ND	2.1	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Bromomethane	ND	2.6	30		µg/L	10	2/22/2018 3:34:42 AM	W49304
2-Butanone	ND	11	100		µg/L	10	2/22/2018 3:34:42 AM	W49304
Carbon disulfide	ND	4.0	100		µg/L	10	2/22/2018 3:34:42 AM	W49304
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Chlorobenzene	ND	1.1	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Chloroethane	ND	2.3	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
Chloroform	ND	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Chloromethane	ND	2.9	30		µg/L	10	2/22/2018 3:34:42 AM	W49304
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
cis-1,2-DCE	26	2.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
Dibromochloromethane	ND	0.72	10		µg/L	10	2/22/2018 3:34:42 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.91	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1-Dichloroethane	15	4.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1-Dichloroethene	28	0.81	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
2-Hexanone	ND	6.6	100		µg/L	10	2/22/2018 3:34:42 AM	W49304
Isopropylbenzene	17	0.51	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
4-Isopropyltoluene	2.4	0.96	10	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/22/2018 3:34:42 AM	W49304
Methylene Chloride	ND	1.1	30		µg/L	10	2/22/2018 3:34:42 AM	W49304
n-Butylbenzene	7.5	1.3	30	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
n-Propylbenzene	31	0.74	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
sec-Butylbenzene	4.3	1.1	10	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
Styrene	ND	1.6	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
Tetrachloroethene (PCE)	2.0	1.3	10	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1,1-Trichloroethane	31	0.73	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Trichloroethene (TCE)	2.9	1.1	10	J	µg/L	10	2/22/2018 3:34:42 AM	W49304
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/22/2018 3:34:42 AM	W49304
Vinyl chloride	ND	1.8	10		µg/L	10	2/22/2018 3:34:42 AM	W49304
Xylenes, Total	84	3.2	15		µg/L	10	2/22/2018 3:34:42 AM	W49304
Surr: 1,2-Dichloroethane-d4	94.3	0	70-130		%Rec	10	2/22/2018 3:34:42 AM	W49304
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	10	2/22/2018 3:34:42 AM	W49304
Surr: Dibromofluoromethane	96.2	0	70-130		%Rec	10	2/22/2018 3:34:42 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018 3:40:00 PM
Lab ID: 1802938-003 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.8	0	70-130		%Rec	10	2/22/2018 3:34:42 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	8.7	0.19	1.0		mg/L	20	2/20/2018 5:23:48 PM	G49265
Surr: BFB	106	0	70-130		%Rec	20	2/20/2018 5:23:48 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.1	0.63	1.0		mg/L	1	2/20/2018 8:16:15 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 8:16:15 PM	36596
Surr: DNOP	113	0	77.5-161		%Rec	1	2/20/2018 8:16:15 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.92	0.22	0.50		mg/L	5	2/16/2018 2:06:56 PM	R49185
Chloride	200	5.0	10		mg/L	20	2/16/2018 2:19:20 PM	R49185
Bromide	2.3	0.073	0.50		mg/L	5	3/2/2018 4:26:18 PM	R49522
Phosphorus, Orthophosphate (As P)	2.2	1.2	2.5	JH	mg/L	5	2/16/2018 2:06:56 PM	R49185
Sulfate	8.3	0.48	2.5		mg/L	5	2/16/2018 2:06:56 PM	R49185
Nitrate+Nitrite as N	0.21	0.13	1.0	J	mg/L	5	3/2/2018 5:04:54 PM	R49522
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.8	0.0049	0.010	*	mg/L	5	2/21/2018 7:41:51 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:29:36 PM	A49271
Calcium	120	0.39	5.0		mg/L	5	2/21/2018 7:41:51 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:29:36 PM	A49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 10:29:36 PM	A49271
Iron	1.9	0.082	0.10	*	mg/L	5	2/21/2018 7:41:51 PM	A49287
Magnesium	28	0.25	1.0		mg/L	1	2/20/2018 10:29:36 PM	A49271
Manganese	1.5	0.0020	0.010	*	mg/L	5	2/21/2018 7:41:51 PM	A49287
Potassium	0.70	0.11	1.0	J	mg/L	1	2/20/2018 10:29:36 PM	A49271
Silver	0.0024	0.0018	0.0050	J	mg/L	1	2/20/2018 10:29:36 PM	A49271
Sodium	340	0.82	5.0		mg/L	5	2/21/2018 7:41:51 PM	A49287
Zinc	0.0083	0.0021	0.010	J	mg/L	1	2/20/2018 10:29:36 PM	A49271
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.8	0.0050	0.010	*	mg/L	5	3/5/2018 1:35:16 PM	36710
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 6:50:37 PM	36710
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 6:50:37 PM	36710
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 6:50:37 PM	36710
Iron	4.8	0.10	0.20	*	mg/L	10	3/5/2018 1:43:34 PM	36710
Manganese	1.5	0.0055	0.010	*	mg/L	5	3/1/2018 5:58:05 PM	36710
Silver	0.0020	0.0012	0.0050	J	mg/L	1	2/28/2018 6:50:37 PM	36710
Zinc	ND	0.0033	0.010		mg/L	1	2/28/2018 6:50:37 PM	36710
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.010	0.0021	0.0050	*	mg/L	5	3/1/2018 6:58:08 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 10:19:25 PM	D49385
Selenium	ND	0.015	0.020		mg/L	20	3/1/2018 6:54:01 PM	R49492
Uranium	0.0044	0.000096	0.00050		mg/L	1	2/26/2018 10:19:25 PM	D49385

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0057	0.0021	0.0050		mg/L	5	2/28/2018 7:49:24 PM	36710
Lead	0.00070	0.00023	0.00050		mg/L	1	2/27/2018 3:12:27 PM	36710
Selenium	0.0085	0.0049	0.0050		mg/L	5	3/2/2018 11:55:31 AM	36710
Uranium	0.0041	0.000068	0.00050		mg/L	1	2/27/2018 3:12:27 PM	36710
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 5:55:53 PM	36783
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	5.9	3.6	10	J	µg/L	1	3/1/2018 3:53:05 PM	36560
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Aniline	ND	3.1	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzoic acid	ND	3.9	20		µg/L	1	3/1/2018 3:53:05 PM	36560
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Carbazole	14	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 3:53:05 PM	36560
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 3:53:05 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 3:53:05 PM	36560
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 3:53:05 PM	36560
2,4-Dimethylphenol	4.8	2.8	10	J	µg/L	1	3/1/2018 3:53:05 PM	36560
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 3:53:05 PM	36560
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 3:53:05 PM	36560
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Fluorene	6.9	4.0	10	J	µg/L	1	3/1/2018 3:53:05 PM	36560
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 3:53:05 PM	36560
1-Methylnaphthalene	130	3.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Methylnaphthalene	150	3.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 3:53:05 PM	36560
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Naphthalene	190	2.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 3:53:05 PM	36560
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 3:53:05 PM	36560
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 3:53:05 PM	36560
Phenanthrene	4.9	4.3	10	J	µg/L	1	3/1/2018 3:53:05 PM	36560
Phenol	6.3	3.1	10	J	µg/L	1	3/1/2018 3:53:05 PM	36560
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 3:53:05 PM	36560
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 3:53:05 PM	36560
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 3:53:05 PM	36560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 3:53:05 PM	36560
Surr: 2-Fluorophenol	42.9	0	15-114		%Rec	1	3/1/2018 3:53:05 PM	36560
Surr: Phenol-d5	38.2	0	15-97.9		%Rec	1	3/1/2018 3:53:05 PM	36560
Surr: 2,4,6-Tribromophenol	75.8	0	15-161		%Rec	1	3/1/2018 3:53:05 PM	36560
Surr: Nitrobenzene-d5	71.5	0	29.3-120		%Rec	1	3/1/2018 3:53:05 PM	36560
Surr: 2-Fluorobiphenyl	73.3	0	17.5-116		%Rec	1	3/1/2018 3:53:05 PM	36560
Surr: 4-Terphenyl-d14	44.2	0	21-92.2		%Rec	1	3/1/2018 3:53:05 PM	36560
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	890	0.62	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Toluene	14	0.64	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Ethylbenzene	620	0.93	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Methyl tert-butyl ether (MTBE)	2000	2.4	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2,4-Trimethylbenzene	410	1.1	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,3,5-Trimethylbenzene	67	0.87	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Naphthalene	250	1.1	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
1-Methylnaphthalene	130	1.6	40		µg/L	10	2/22/2018 4:32:28 AM	W49304
2-Methylnaphthalene	120	1.5	40		µg/L	10	2/22/2018 4:32:28 AM	W49304
Acetone	ND	8.2	100		µg/L	10	2/22/2018 4:32:28 AM	W49304
Bromobenzene	ND	1.4	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Bromodichloromethane	ND	1.8	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Bromoform	ND	2.1	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Bromomethane	ND	2.6	30		µg/L	10	2/22/2018 4:32:28 AM	W49304
2-Butanone	ND	11	100		µg/L	10	2/22/2018 4:32:28 AM	W49304
Carbon disulfide	ND	4.0	100		µg/L	10	2/22/2018 4:32:28 AM	W49304
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Chlorobenzene	ND	1.1	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Chloroethane	ND	2.3	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
Chloroform	ND	4.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Chloromethane	ND	2.9	30		µg/L	10	2/22/2018 4:32:28 AM	W49304
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
cis-1,2-DCE	11	2.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
Dibromochloromethane	ND	0.72	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Dibromomethane	ND	0.91	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	2/22/2018 4:32:28 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1-Dichloroethane	8.3	4.0	10	J	µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1-Dichloroethene	11	0.81	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
2-Hexanone	ND	6.6	100		µg/L	10	2/22/2018 4:32:28 AM	W49304
Isopropylbenzene	23	0.51	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
4-Isopropyltoluene	3.8	0.96	10	J	µg/L	10	2/22/2018 4:32:28 AM	W49304
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/22/2018 4:32:28 AM	W49304
Methylene Chloride	ND	1.1	30		µg/L	10	2/22/2018 4:32:28 AM	W49304
n-Butylbenzene	8.3	1.3	30	J	µg/L	10	2/22/2018 4:32:28 AM	W49304
n-Propylbenzene	48	0.74	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
sec-Butylbenzene	3.4	1.1	10	J	µg/L	10	2/22/2018 4:32:28 AM	W49304
Styrene	ND	1.6	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/22/2018 4:32:28 AM	W49304
Vinyl chloride	ND	1.8	10		µg/L	10	2/22/2018 4:32:28 AM	W49304
Xylenes, Total	730	3.2	15		µg/L	10	2/22/2018 4:32:28 AM	W49304
Surr: 1,2-Dichloroethane-d4	92.8	0	70-130		%Rec	10	2/22/2018 4:32:28 AM	W49304
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	10	2/22/2018 4:32:28 AM	W49304
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	10	2/22/2018 4:32:28 AM	W49304
Surr: Toluene-d8	97.5	0	70-130		%Rec	10	2/22/2018 4:32:28 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/14/2018
Lab ID: 1802938-004
Matrix: AQUEOUS
Received Date: 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	9.9	0.19	1.0		mg/L	20	2/20/2018 5:46:53 PM	G49265
Surr: BFB	97.1	0	70-130		%Rec	20	2/20/2018 5:46:53 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date:
Lab ID: 1802938-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Toluene	ND	0.064	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Naphthalene	ND	0.11	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Acetone	ND	0.82	10		µg/L	1	2/21/2018 11:43:11 PM	W49304
Bromobenzene	ND	0.14	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Bromoform	ND	0.21	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Bromomethane	ND	0.26	3.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
2-Butanone	ND	1.1	10		µg/L	1	2/21/2018 11:43:11 PM	W49304
Carbon disulfide	ND	0.40	10		µg/L	1	2/21/2018 11:43:11 PM	W49304
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Chloroethane	ND	0.23	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Chloroform	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Chloromethane	ND	0.29	3.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Dibromomethane	ND	0.091	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date:
Lab ID: 1802938-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
2-Hexanone	ND	0.66	10		µg/L	1	2/21/2018 11:43:11 PM	W49304
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/21/2018 11:43:11 PM	W49304
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Styrene	ND	0.16	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/21/2018 11:43:11 PM	W49304
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/21/2018 11:43:11 PM	W49304
Surr: 1,2-Dichloroethane-d4	94.3	0	70-130		%Rec	1	2/21/2018 11:43:11 PM	W49304
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	2/21/2018 11:43:11 PM	W49304
Surr: Dibromofluoromethane	98.0	0	70-130		%Rec	1	2/21/2018 11:43:11 PM	W49304
Surr: Toluene-d8	102	0	70-130		%Rec	1	2/21/2018 11:43:11 PM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/20/2018 1:56:28 PM	G49265
Surr: BFB	111	0	70-130		%Rec	1	2/20/2018 1:56:28 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49194**	RunNo: **49194**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49194**	RunNo: **49194**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586539** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	87.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Chromium	0.0059	0.0060	0.006000	0	98.2	50	150			J
Copper	0.0050	0.0060	0.006000	0	83.0	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.7	50	150			J
Potassium	0.53	1.0	0.5000	0	105	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Zinc	0.0058	0.010	0.005000	0	116	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49194**	RunNo: **49194**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1586540** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.54	0.0060	0.5000	0	108	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Potassium	49	1.0	50.00	0	98.1	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802938-002FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-10**	Batch ID: **A49194**			RunNo: **49194**				
Prep Date:		Analysis Date: **2/16/2018**			SeqNo: **1588497**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.9	70	130			
Chromium	0.47	0.0060	0.5000	0	94.5	70	130			
Copper	0.55	0.0060	0.5000	0	111	70	130			
Magnesium	85	1.0	50.00	35.80	97.9	70	130			
Potassium	49	1.0	50.00	0.4991	96.6	70	130			
Silver	0.095	0.0050	0.1000	0.002590	92.2	70	130			
Zinc	0.48	0.010	0.5000	0.007770	94.5	70	130			

Sample ID	**1802938-002FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-10**	Batch ID: **A49194**			RunNo: **49194**				
Prep Date:		Analysis Date: **2/16/2018**			SeqNo: **1588498**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.1	70	130	1.20	20	
Chromium	0.48	0.0060	0.5000	0	96.2	70	130	1.78	20	
Copper	0.57	0.0060	0.5000	0	113	70	130	2.25	20	
Magnesium	90	1.0	50.00	35.80	108	70	130	5.66	20	
Potassium	54	1.0	50.00	0.4991	107	70	130	10.5	20	
Silver	0.099	0.0050	0.1000	0.002590	96.7	70	130	4.54	20	
Zinc	0.49	0.010	0.5000	0.007770	96.8	70	130	2.37	20	

Sample ID	**1802938-003FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-09**	Batch ID: **A49194**			RunNo: **49194**				
Prep Date:		Analysis Date: **2/16/2018**			SeqNo: **1588500**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.97	0.0020	0.5000	0.5185	90.8	70	130			
Cadmium	0.48	0.0020	0.5000	0	96.6	70	130			
Chromium	0.47	0.0060	0.5000	0	93.4	70	130			
Copper	0.54	0.0060	0.5000	0	108	70	130			
Magnesium	75	1.0	50.00	28.06	93.5	70	130			
Potassium	48	1.0	50.00	0.4539	95.3	70	130			
Silver	0.094	0.0050	0.1000	0.003510	90.0	70	130			
Zinc	0.47	0.010	0.5000	0.007960	93.2	70	130			

Sample ID	**1802938-003FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-09**	Batch ID: **A49194**			RunNo: **49194**				
Prep Date:		Analysis Date: **2/16/2018**			SeqNo: **1588501**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **1802938-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-09**	Batch ID: **A49194**	RunNo: **49194**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1588501** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.98	0.0020	0.5000	0.5185	91.4	70	130	0.283	20	
Cadmium	0.49	0.0020	0.5000	0	97.1	70	130	0.506	20	
Chromium	0.47	0.0060	0.5000	0	94.4	70	130	1.01	20	
Copper	0.55	0.0060	0.5000	0	109	70	130	1.55	20	
Magnesium	78	1.0	50.00	28.06	100	70	130	4.25	20	
Potassium	53	1.0	50.00	0.4539	105	70	130	9.69	20	
Silver	0.099	0.0050	0.1000	0.003510	95.1	70	130	5.26	20	
Zinc	0.48	0.010	0.5000	0.007960	94.6	70	130	1.50	20	

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0018	0.0020	0.002000	0	89.5	50	150			J
Calcium	0.51	1.0	0.5000	0	101	50	150			J
Chromium	0.0051	0.0060	0.006000	0	84.5	50	150			J
Copper	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.024	0.020	0.02000	0	120	50	150			
Magnesium	0.51	1.0	0.5000	0	101	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			
Potassium	0.49	1.0	0.5000	0	97.9	50	150			J
Silver	0.0052	0.0050	0.005000	0	103	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A49271**			RunNo: **49271**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589732**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.46	1.0	0.5000	0	92.8	50	150			J
Zinc	0.0058	0.010	0.005000	0	116	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A49271**			RunNo: **49271**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589733**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Calcium	47	1.0	50.00	0	94.8	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	49	1.0	50.00	0	97.6	85	115			
Manganese	0.51	0.0020	0.5000	0	103	85	115			
Potassium	48	1.0	50.00	0	95.8	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	48	1.0	50.00	0	96.2	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	**1802938-002FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**MKTF-10**	Batch ID: **A49271**			RunNo: **49271**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589784**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	390	5.0	250.0	148.9	98.0	70	130			

Sample ID	**1802938-002FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**MKTF-10**	Batch ID: **A49271**			RunNo: **49271**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589785**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	390	5.0	250.0	148.9	97.9	70	130	0.0698	20	

Sample ID	**1802938-003FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**MKTF-09**	Batch ID: **A49271**			RunNo: **49271**					
Prep Date:		Analysis Date: **2/20/2018**			SeqNo: **1589787**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	360	5.0	250.0	143.7	87.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802938-003FMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**MKTF-09**	Batch ID: **A49271**		RunNo: **49271**						
Prep Date:		Analysis Date: **2/20/2018**		SeqNo: **1589787**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.6	0.10	2.500	1.278	93.6	70	130			
Sodium	470	5.0	250.0	253.8	88.3	70	130			

Sample ID	**1802938-003FMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**MKTF-09**	Batch ID: **A49271**		RunNo: **49271**						
Prep Date:		Analysis Date: **2/20/2018**		SeqNo: **1589788**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	143.7	89.9	70	130	1.56	20	
Iron	3.6	0.10	2.500	1.278	94.6	70	130	0.684	20	
Sodium	480	5.0	250.0	253.8	91.3	70	130	1.60	20	

Sample ID	**MB-A**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **A49287**		RunNo: **49287**						
Prep Date:		Analysis Date: **2/21/2018**		SeqNo: **1591279**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **A49287**		RunNo: **49287**						
Prep Date:		Analysis Date: **2/21/2018**		SeqNo: **1591280**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.0	50	150			J
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Iron	0.019	0.020	0.02000	0	95.5	50	150			J
Manganese	0.0016	0.0020	0.002000	0	80.0	50	150			J
Sodium	0.55	1.0	0.5000	0	109	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **A49287**		RunNo: **49287**						
Prep Date:		Analysis Date: **2/21/2018**		SeqNo: **1591281**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49287**	RunNo: **49287**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.6	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Sodium	47	1.0	50.00	0	94.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB-36710**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596555** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.00066	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-36710**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.50	0.0060	0.5000	0	99.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	98.2	85	115			

Sample ID **LLLCS-36710**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36710**	RunNo: **49429**
Prep Date: **2/26/2018**	Analysis Date: **2/27/2018**	SeqNo: **1596570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0023	0.0020	0.002000	0	114	50	150			
Cadmium	0.0024	0.0020	0.002000	0	120	50	150			
Chromium	0.0055	0.0060	0.006000	0	91.8	50	150			J
Copper	0.0060	0.0060	0.006000	0	99.5	50	150			J
Iron	0.025	0.020	0.02000	0	123	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Silver	0.0049	0.0050	0.005000	0	98.6	50	150			J
Zinc	0.0055	0.010	0.005000	0	110	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	94.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.7	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595036** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.012	0.00050	0.01250	0	96.2	85	115			
Selenium	0.024	0.0010	0.02500	0	94.9	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **D49385**			RunNo: **49385**					
Prep Date:		Analysis Date: **2/26/2018**			SeqNo: **1595062**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Sample ID	**1802938-003FMSLL**	SampType: **MS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-09**	Batch ID: **D49385**			RunNo: **49385**					
Prep Date:		Analysis Date: **2/26/2018**			SeqNo: **1595064**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	106	70	130			
Uranium	0.020	0.00050	0.01250	0.005354	115	70	130			

Sample ID	**1802938-003FMSDL**	SampType: **MSD**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-09**	Batch ID: **D49385**			RunNo: **49385**					
Prep Date:		Analysis Date: **2/26/2018**			SeqNo: **1595065**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	105	70	130	1.13	20	
Uranium	0.020	0.00050	0.01250	0.005354	113	70	130	0.951	20	

Sample ID	**1802938-003FMS**	SampType: **MS**			TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-09**	Batch ID: **R49492**			RunNo: **49492**					
Prep Date:		Analysis Date: **3/1/2018**			SeqNo: **1599227**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.11	0.0050	0.1250	0.002451	88.3	70	130			
Selenium	0.11	0.0050	0.1250	0.004812	84.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MB-36710**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595823**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36710**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595824**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00054	0.0010	0.001000	0	54.2	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Sample ID	**MSLCS-36710**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36710**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595825**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.0	85	115			
Lead	0.012	0.00050	0.01250	0	95.1	85	115			
Uranium	0.012	0.00050	0.01250	0	94.9	85	115			

Sample ID	**MB-36710**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36710**	RunNo:	**49509**					
Prep Date:	**2/26/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600621**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36710**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36710**	RunNo:	**49509**					
Prep Date:	**2/26/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600622**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00084	0.0010	0.001000	0	83.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MSLCS-36710**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **36710**		RunNo: **49509**						
Prep Date:	**2/26/2018**	Analysis Date: **3/2/2018**		SeqNo: **1600623**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		0.024	0.0010	0.02500	0	95.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MB-36783**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36783**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600083**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-36783**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36783**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600084**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49185**	RunNo: **49185**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587334** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49185**	RunNo: **49185**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587335** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	91.2	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49522**	RunNo: **49522**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS-b**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49522**	RunNo: **49522**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.1	90	110			
Bromide	2.3	0.10	2.500	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **LCS-36596**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1588530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	92.3	135			
Surr: DNOP	0.52		0.5000		104	77.5	161			

Sample ID **MB-36596**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1588531** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		111	77.5	161			

Sample ID **1802938-001CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-04**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1589303** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	12	1.0	5.000	5.042	136	83.3	151			
Surr: DNOP	0.56		0.5000		113	77.5	161			

Sample ID **1802938-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-04**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1589304** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	12	1.0	5.000	5.042	132	83.3	151	1.83	20	
Surr: DNOP	0.58		0.5000		116	77.5	161	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.5	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **1802938-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-04**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1591079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	10	200.0	897.8	90.4	60.5	137			E
Toluene	220	10	200.0	13.60	104	70	130			
Chlorobenzene	200	10	200.0	0	102	70	130			
1,1-Dichloroethene	240	10	200.0	11.54	113	70	130			
Trichloroethene (TCE)	190	10	200.0	0	94.8	70	130			
Surr: 1,2-Dichloroethane-d4	94		100.0		93.6	70	130			
Surr: 4-Bromofluorobenzene	110		100.0		109	70	130			
Surr: Dibromofluoromethane	97		100.0		96.8	70	130			
Surr: Toluene-d8	98		100.0		98.1	70	130			

Sample ID **1802938-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-04**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1591080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1100	10	200.0	897.8	79.3	60.5	137	2.08	20	E
Toluene	210	10	200.0	13.60	98.5	70	130	5.43	20	
Chlorobenzene	200	10	200.0	0	101	70	130	1.41	20	
1,1-Dichloroethene	230	10	200.0	11.54	108	70	130	3.53	20	
Trichloroethene (TCE)	190	10	200.0	0	92.6	70	130	2.35	20	
Surr: 1,2-Dichloroethane-d4	94		100.0		94.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	110		100.0		108	70	130	0	0	
Surr: Dibromofluoromethane	99		100.0		98.5	70	130	0	0	
Surr: Toluene-d8	94		100.0		93.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **lcs-36560**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	90	10	100.0	0	90.2	39.7	103			
4-Chloro-3-methylphenol	200	10	200.0	0	98.3	40.5	108			
2-Chlorophenol	170	10	200.0	0	86.6	35	103			
1,4-Dichlorobenzene	76	10	100.0	0	75.8	24.7	93.7			
2,4-Dinitrotoluene	88	10	100.0	0	87.7	35.6	91.4			
N-Nitrosodi-n-propylamine	94	10	100.0	0	93.8	41.6	114			
4-Nitrophenol	150	10	200.0	0	75.0	20.7	74.3			S
Pentachlorophenol	160	20	200.0	0	80.7	25.3	98.5			
Phenol	130	10	200.0	0	64.1	20.9	75.1			
Pyrene	89	10	100.0	0	89.0	45.6	108			
1,2,4-Trichlorobenzene	87	10	100.0	0	87.0	30.3	106			
Surr: 2-Fluorophenol	150		200.0		75.8	15	114			
Surr: Phenol-d5	130		200.0		66.4	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		93.8	15	161			
Surr: Nitrobenzene-d5	94		100.0		94.4	29.3	120			
Surr: 2-Fluorobiphenyl	89		100.0		89.5	17.5	116			
Surr: 4-Terphenyl-d14	62		100.0		62.4	21	92.2			

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.1	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**	
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **mb-36560**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36560**	RunNo: **49495**
Prep Date: **2/16/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	110		200.0		53.9	15	114			
Surr: Phenol-d5	80		200.0		40.0	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.1	15	161			
Surr: Nitrobenzene-d5	77		100.0		77.0	29.3	120			
Surr: 2-Fluorobiphenyl	70		100.0		70.0	17.5	116			
Surr: 4-Terphenyl-d14	58		100.0		57.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802938**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802938-001BMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-04**	Batch ID:	**G49265**		RunNo:	**49265**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589378**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	1.0	10.00	9.584	114	70	130			
Surr: BFB	190		200.0		94.6	70	130			

Sample ID	**1802938-001BMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-04**	Batch ID:	**G49265**		RunNo:	**49265**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589380**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	1.0	10.00	9.584	112	70	130	0.861	20	
Surr: BFB	190		200.0		93.6	70	130	0	0	

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSW**	Batch ID:	**G49265**		RunNo:	**49265**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589405**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.56	0.050	0.5000	0	112	70	130			
Surr: BFB	10		10.00		101	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBW**	Batch ID:	**G49265**		RunNo:	**49265**				
Prep Date:		Analysis Date:	**2/20/2018**		SeqNo:	**1589406**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	12		10.00		118	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1802938 | RcptNo: 1

Received By: **Sophia Campuzano** 2/16/2018 9:30:00 AM

Completed By: **Anne Thorne** 2/16/2018 10:15:22 AM

Reviewed By: DJS 2/16/18

Labeled By: SRC 02/16/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ SRC No ☐
8. Was preservative added to bottles? Yes ☑ SRC No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? yes
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: SRC

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: For metals analysis: Added 0.5 mL HNO_3 to ~0046 for acceptable pH. Held for 24 hrs prior to analysis. 02/16/18 @ 1055 SRC
CUSTODY SEALS INTACT ON SAMPLE BOTTLES/at 2/16/18 SRC

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0287

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802938	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/14/18	1405	WATER	MKTF-04	40 ML VOA-5	HCL	001			✓							✓						
				1 L AMBER-2	NEAT	001											✓					
				250 ML AMBER-1	NEAT	001			✓													
				250 ML PLASTIC-1	HNO_3	001												✓				
				125 ML PLASTIC-1	HNO_3	001												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	001													✓			
				125 ML PLASTIC-1	NEAT	001													✓			
	1455	WATER	MKTF-10	40 ML VOA-5	NEAT	002			✓							✓						
				1 L AMBER-1	NEAT	002											✓					
				250 ML AMBER-1	NEAT	002			✓													
				250 ML PLASTIC-1	HNO_3	002												✓				
				125 ML PLASTIC-1	HNO_3	002												✓	✓			

Date:	Time:	Relinquished by:	Received by	Date	Time
2/15/18	0700		courier		
				02/16/18	0930
Date:	Time:	Relinquished by:	Received by	Date	Time

Remarks:
*ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802938	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	* MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/14/18	1455	WATER	MKTF-10	125 ML PLASTIC-1	H_2SO_4	002													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT	003													✓			
	1540	WATER	MKTF-09	40 ML VOA-5	NEAT TP HCL	003			✓							✓						
				1 L AMBER-1	NEAT	003											✓					
				250 ML AMBER-1	NEAT	003			✓													
				250 ML PLASTIC-1	HNO_3	003												✓				
				125 ML PLASTIC-1	HNO_3	003												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	003													✓			
				125 ML PLASTIC-1	NEAT	003													✓			
	[redacted]	WATER	DUP07	40 ML VOA-5	HCL	004			✓							✓						
				1 L AMBER-1	NEAT	004											✓					
				250 ML AMBER-1	NEAT	004			✓													

Date: 2/15/18 Time: 0700 Relinquished by:
Received by: Carrier Date: 02/16/18 Time: 0930
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 802938	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/14/18	—	WATER	DUP07	250ML PLASTIC-1	HNO_3	001												✓				
↓	↓	↓	↓	125 ML PLASTIC-1	HNO_3	002												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	003													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT	004													✓			
↓	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	005										✓						

Date: 2/15/18 Time: 0700 Relinquished by:
Received by: Courier Date: 02/16/18 Time: 0930
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 14, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL: (505) 722-7321
FAX

RE: 1st QTR 2018 GW SAMPLING (MKTF) OrderNo.: 1802951

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 12 sample(s) on 2/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.4	0.63	1.0		mg/L	1	2/20/2018 12:33:59 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 12:33:59 PM	36596
Surr: DNOP	133	0	77.5-161		%Rec	1	2/20/2018 12:33:59 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	4.5	0.22	0.50	*	mg/L	5	2/16/2018 9:58:30 PM	R49185
Chloride	760	25	50		mg/L	100	3/3/2018 12:14:14 AM	R49521
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 9:58:30 PM	R49185
Bromide	ND	0.073	0.50		mg/L	5	3/3/2018 12:01:49 AM	R49521
Nitrogen, Nitrate (As N)	0.13	0.11	0.50	J	mg/L	5	2/16/2018 9:58:30 PM	R49185
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/16/2018 9:58:30 PM	R49185
Sulfate	57	0.48	2.5		mg/L	5	2/16/2018 9:58:30 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.67	0.00099	0.0020		mg/L	1	2/20/2018 10:53:38 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:53:38 PM	B49271
Calcium	64	0.078	1.0		mg/L	1	2/20/2018 10:53:38 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:53:38 PM	B49271
Copper	0.019	0.0032	0.0060		mg/L	1	2/20/2018 10:53:38 PM	B49271
Iron	0.095	0.016	0.020		mg/L	1	2/20/2018 10:53:38 PM	B49271
Magnesium	6.1	0.25	1.0		mg/L	1	2/20/2018 10:53:38 PM	B49271
Manganese	0.37	0.00039	0.0020	*	mg/L	1	2/20/2018 10:53:38 PM	B49271
Potassium	17	0.11	1.0		mg/L	1	2/20/2018 10:53:38 PM	B49271
Silver	0.0020	0.0018	0.0050	J	mg/L	1	2/20/2018 10:53:38 PM	B49271
Sodium	540	1.6	10		mg/L	10	2/21/2018 7:58:08 PM	A49287
Zinc	0.072	0.0021	0.010		mg/L	1	2/21/2018 7:55:56 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.6	0.0050	0.010		mg/L	5	3/5/2018 1:45:41 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:11:15 PM	36715
Chromium	0.023	0.0018	0.0060		mg/L	1	2/28/2018 7:11:15 PM	36715
Copper	0.078	0.0041	0.0060		mg/L	1	2/28/2018 7:11:15 PM	36715
Iron	18	0.51	1.0	*	mg/L	50	3/1/2018 9:31:17 PM	36715
Manganese	0.80	0.0055	0.010	*	mg/L	5	3/1/2018 9:18:34 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:11:15 PM	36715
Zinc	0.29	0.016	0.050		mg/L	5	3/1/2018 9:18:34 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0027	0.0021	0.0050	J	mg/L	5	3/1/2018 7:51:36 PM	R49492
Lead	ND	0.00087	0.0025		mg/L	5	3/1/2018 7:51:36 PM	R49492
Selenium	ND	0.0038	0.0050		mg/L	5	3/1/2018 7:51:36 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0020	0.00048	0.0025	J	mg/L	5	3/1/2018 7:51:36 PM	R49492
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0071	0.00041	0.0010		mg/L	1	2/27/2018 3:17:22 PM	36715
Lead	0.025	0.0011	0.0025	*	mg/L	5	2/28/2018 8:04:09 PM	36715
Selenium	0.0025	0.00098	0.0010		mg/L	1	3/2/2018 12:00:25 PM	36715
Uranium	0.0060	0.000068	0.00050		mg/L	1	2/27/2018 3:17:22 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00044	0.000037	0.00020		mg/L	1	3/1/2018 6:09:35 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Aniline	ND	3.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Benzoic acid	7.7	3.9	20	J	µg/L	1	3/1/2018 5:16:38 PM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 5:16:38 PM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4-Dimethylphenol	3.6	2.8	10	J	µg/L	1	3/1/2018 5:16:38 PM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 5:16:38 PM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
3+4-Methylphenol	6.3	3.2	10	J	µg/L	1	3/1/2018 5:16:38 PM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Naphthalene	ND	2.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 5:16:38 PM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 5:16:38 PM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 5:16:38 PM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Phenol	62	3.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 5:16:38 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 5:16:38 PM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 5:16:38 PM	36609
Surr: 2-Fluorophenol	58.5	0	15-114		%Rec	1	3/1/2018 5:16:38 PM	36609
Surr: Phenol-d5	44.2	0	15-97.9		%Rec	1	3/1/2018 5:16:38 PM	36609
Surr: 2,4,6-Tribromophenol	70.0	0	15-161		%Rec	1	3/1/2018 5:16:38 PM	36609
Surr: Nitrobenzene-d5	78.9	0	29.3-120		%Rec	1	3/1/2018 5:16:38 PM	36609
Surr: 2-Fluorobiphenyl	55.4	0	17.5-116		%Rec	1	3/1/2018 5:16:38 PM	36609
Surr: 4-Terphenyl-d14	40.0	0	21-92.2		%Rec	1	3/1/2018 5:16:38 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1800	6.2	100		µg/L	100	2/22/2018 5:30:08 AM	W49304
Toluene	24	0.64	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Ethylbenzene	15	0.93	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Methyl tert-butyl ether (MTBE)	40	2.4	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2,4-Trimethylbenzene	26	1.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,3,5-Trimethylbenzene	41	0.87	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Naphthalene	8.1	1.1	20	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
1-Methylnaphthalene	6.5	1.6	40	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
2-Methylnaphthalene	ND	1.5	40		µg/L	10	2/22/2018 6:14:53 PM	R49323
Acetone	50	8.2	100	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
Bromobenzene	ND	1.4	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Bromodichloromethane	ND	1.8	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Bromoform	ND	2.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Bromomethane	ND	2.6	30		µg/L	10	2/22/2018 6:14:53 PM	R49323
2-Butanone	ND	11	100		µg/L	10	2/22/2018 6:14:53 PM	R49323
Carbon disulfide	ND	4.0	100		µg/L	10	2/22/2018 6:14:53 PM	R49323
Carbon Tetrachloride	ND	1.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Chlorobenzene	ND	1.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Chloroethane	ND	2.3	20		µg/L	10	2/22/2018 6:14:53 PM	R49323
Chloroform	ND	4.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Chloromethane	ND	2.9	30		µg/L	10	2/22/2018 6:14:53 PM	R49323
2-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
4-Chlorotoluene	ND	4.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
cis-1,2-DCE	ND	2.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	2/22/2018 6:14:53 PM	R49323
Dibromochloromethane	ND	0.72	10		µg/L	10	2/22/2018 6:14:53 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.91	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Dichlorodifluoromethane	ND	10	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1-Dichloroethane	6.2	4.0	10	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1-Dichloroethene	ND	0.81	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2-Dichloropropane	ND	1.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,3-Dichloropropane	ND	1.7	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
2,2-Dichloropropane	ND	1.6	20		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1-Dichloropropene	ND	0.93	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Hexachlorobutadiene	ND	8.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
2-Hexanone	ND	6.6	100		µg/L	10	2/22/2018 6:14:53 PM	R49323
Isopropylbenzene	ND	0.51	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
4-Isopropyltoluene	ND	0.96	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	2/22/2018 6:14:53 PM	R49323
Methylene Chloride	ND	1.1	30		µg/L	10	2/22/2018 6:14:53 PM	R49323
n-Butylbenzene	1.9	1.3	30	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
n-Propylbenzene	ND	0.74	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
sec-Butylbenzene	ND	1.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Styrene	ND	1.6	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
tert-Butylbenzene	ND	1.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	2/22/2018 6:14:53 PM	R49323
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
trans-1,2-DCE	ND	1.8	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
Trichlorofluoromethane	ND	1.8	10		µg/L	10	2/22/2018 6:14:53 PM	R49323
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	2/22/2018 6:14:53 PM	R49323
Vinyl chloride	5.8	1.8	10	J	µg/L	10	2/22/2018 6:14:53 PM	R49323
Xylenes, Total	230	3.2	15		µg/L	10	2/22/2018 6:14:53 PM	R49323
Surr: 1,2-Dichloroethane-d4	98.8	0	70-130		%Rec	10	2/22/2018 6:14:53 PM	R49323
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	10	2/22/2018 6:14:53 PM	R49323
Surr: Dibromofluoromethane	104	0	70-130		%Rec	10	2/22/2018 6:14:53 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 9:15:00 AM
Lab ID: 1802951-001 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.4	0	70-130		%Rec	10	2/22/2018 6:14:53 PM	R49323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	8.4	0.19	1.0		mg/L	20	2/21/2018 12:21:20 PM	W49276
Surr: BFB	117	0	70-130		%Rec	20	2/21/2018 12:21:20 PM	W49276

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.1	0.63	1.0		mg/L	1	2/20/2018 1:01:05 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 1:01:05 PM	36596
Surr: DNOP	134	0	77.5-161		%Rec	1	2/20/2018 1:01:05 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.55	0.22	0.50		mg/L	5	2/16/2018 10:23:19 PM	R49185
Chloride	3100	120	250		mg/L	500	3/3/2018 12:39:02 AM	R49521
Nitrogen, Nitrite (As N)	ND	0.14	2.0		mg/L	20	2/16/2018 10:35:44 PM	R49185
Bromide	1.9	0.073	0.50		mg/L	5	3/3/2018 12:26:38 AM	R49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 10:23:19 PM	R49185
Phosphorus, Orthophosphate (As P)	3.4	1.2	2.5		mg/L	5	2/16/2018 10:23:19 PM	R49185
Sulfate	15	0.48	2.5		mg/L	5	2/16/2018 10:23:19 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	33	0.049	0.10	*	mg/L	50	2/21/2018 8:05:45 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:55:32 PM	B49271
Calcium	950	0.78	10		mg/L	10	2/21/2018 8:03:53 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:55:32 PM	B49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 10:55:32 PM	B49271
Iron	53	1.6	2.0	*	mg/L	100	2/27/2018 6:27:35 PM	B49429
Magnesium	250	1.2	5.0		mg/L	5	2/21/2018 8:01:59 PM	A49287
Manganese	17	0.020	0.10	*	mg/L	50	2/21/2018 8:05:45 PM	A49287
Potassium	6.9	0.11	1.0		mg/L	1	2/20/2018 10:55:32 PM	B49271
Silver	0.011	0.0018	0.0050		mg/L	1	2/20/2018 10:55:32 PM	B49271
Sodium	1100	8.2	50		mg/L	50	2/21/2018 8:05:45 PM	A49287
Zinc	0.0093	0.0021	0.010	J	mg/L	1	2/21/2018 8:00:00 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	32	0.050	0.10	*	mg/L	50	3/5/2018 1:52:54 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:16:47 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:16:47 PM	36715
Copper	0.029	0.0041	0.0060		mg/L	1	2/28/2018 7:16:47 PM	36715
Iron	52	1.0	2.0	*	mg/L	100	3/5/2018 1:54:50 PM	36715
Manganese	16	0.022	0.040	*	mg/L	20	3/1/2018 9:43:10 PM	36715
Silver	0.011	0.0012	0.0050		mg/L	1	2/28/2018 7:16:47 PM	36715
Zinc	0.029	0.0033	0.010		mg/L	1	3/1/2018 9:32:54 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0096	0.0021	0.0050		mg/L	5	3/1/2018 8:12:13 PM	R49492
Lead	0.0015	0.00087	0.0025	J	mg/L	5	3/1/2018 8:12:13 PM	R49492
Selenium	0.010	0.0038	0.0050		mg/L	5	3/1/2018 8:12:13 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0017	0.00048	0.0025	J	mg/L	5	3/1/2018 8:12:13 PM	R49492
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	2/28/2018 8:09:04 PM	36715
Lead	0.0073	0.0011	0.0025		mg/L	5	2/28/2018 8:09:04 PM	36715
Selenium	0.010	0.0049	0.0050		mg/L	5	3/2/2018 12:05:20 PM	36715
Uranium	0.0031	0.00034	0.0025		mg/L	5	2/28/2018 8:09:04 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/2/2018 12:22:45 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Acenaphthylene	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Aniline	ND	15	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Anthracene	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Azobenzene	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benz(a)anthracene	ND	19	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzo(a)pyrene	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzo(b)fluoranthene	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzo(g,h,i)perylene	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzo(k)fluoranthene	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzoic acid	71	20	100	JD	µg/L	1	3/1/2018 6:39:30 PM	36609
Benzyl alcohol	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Bis(2-chloroethoxy)methane	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Bis(2-chloroethyl)ether	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Bis(2-chloroisopropyl)ether	ND	19	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Bis(2-ethylhexyl)phthalate	ND	24	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Bromophenyl phenyl ether	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Butyl benzyl phthalate	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Carbazole	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Chloro-3-methylphenol	ND	32	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Chloroaniline	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Chloronaphthalene	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Chlorophenol	ND	38	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Chlorophenyl phenyl ether	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Chrysene	ND	19	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Di-n-butyl phthalate	ND	25	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Di-n-octyl phthalate	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Dibenz(a,h)anthracene	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Dibenzofuran	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
1,3-Dichlorobenzene	ND	9.1	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
1,4-Dichlorobenzene	ND	11	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
3,3´-Dichlorobenzidine	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Diethyl phthalate	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Dimethyl phthalate	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4-Dichlorophenol	ND	28	100	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4-Dimethylphenol	400	14	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4,6-Dinitro-2-methylphenol	ND	19	100	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4-Dinitrophenol	ND	13	100	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4-Dinitrotoluene	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,6-Dinitrotoluene	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Fluoranthene	ND	21	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Fluorene	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Hexachlorobenzene	ND	19	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Hexachlorobutadiene	ND	6.7	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Hexachlorocyclopentadiene	ND	6.4	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Hexachloroethane	ND	6.0	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Indeno(1,2,3-cd)pyrene	ND	21	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Isophorone	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
1-Methylnaphthalene	65	17	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Methylnaphthalene	77	16	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Methylphenol	27	17	50	JD	µg/L	1	3/1/2018 6:39:30 PM	36609
3+4-Methylphenol	ND	16	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
N-Nitrosodi-n-propylamine	ND	23	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
N-Nitrosodimethylamine	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
N-Nitrosodiphenylamine	ND	19	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Naphthalene	310	14	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Nitroaniline	ND	25	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
3-Nitroaniline	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Nitroaniline	ND	20	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Nitrobenzene	ND	18	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2-Nitrophenol	ND	26	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
4-Nitrophenol	ND	27	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Pentachlorophenol	ND	25	100	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Phenanthrene	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Phenol	230	16	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Pyrene	ND	22	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Pyridine	ND	11	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	11	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4,5-Trichlorophenol	ND	26	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
2,4,6-Trichlorophenol	ND	27	50	D	µg/L	1	3/1/2018 6:39:30 PM	36609
Surr: 2-Fluorophenol	28.7	0	15-114	D	%Rec	1	3/1/2018 6:39:30 PM	36609
Surr: Phenol-d5	50.0	0	15-97.9	D	%Rec	1	3/1/2018 6:39:30 PM	36609
Surr: 2,4,6-Tribromophenol	97.8	0	15-161	D	%Rec	1	3/1/2018 6:39:30 PM	36609
Surr: Nitrobenzene-d5	99.6	0	29.3-120	D	%Rec	1	3/1/2018 6:39:30 PM	36609
Surr: 2-Fluorobiphenyl	81.5	0	17.5-116	D	%Rec	1	3/1/2018 6:39:30 PM	36609
Surr: 4-Terphenyl-d14	62.9	0	21-92.2	D	%Rec	1	3/1/2018 6:39:30 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	12000	62	1000		µg/L	1000	2/22/2018 5:58:55 AM	W49304
Toluene	190	6.4	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Ethylbenzene	960	9.3	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Methyl tert-butyl ether (MTBE)	55	24	100	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2,4-Trimethylbenzene	1300	11	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,3,5-Trimethylbenzene	360	8.7	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Naphthalene	240	11	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
1-Methylnaphthalene	63	16	400	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
2-Methylnaphthalene	66	15	400	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
Acetone	ND	82	1000		µg/L	100	2/22/2018 6:27:43 AM	W49304
Bromobenzene	ND	14	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Bromodichloromethane	ND	18	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Bromoform	ND	21	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Bromomethane	ND	26	300		µg/L	100	2/22/2018 6:27:43 AM	W49304
2-Butanone	ND	110	1000		µg/L	100	2/22/2018 6:27:43 AM	W49304
Carbon disulfide	ND	40	1000		µg/L	100	2/22/2018 6:27:43 AM	W49304
Carbon Tetrachloride	ND	11	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Chlorobenzene	ND	11	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Chloroethane	ND	23	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
Chloroform	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Chloromethane	ND	29	300		µg/L	100	2/22/2018 6:27:43 AM	W49304
2-Chlorotoluene	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
4-Chlorotoluene	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
cis-1,2-DCE	ND	20	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
Dibromochloromethane	ND	7.2	100		µg/L	100	2/22/2018 6:27:43 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	9.1	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,3-Dichlorobenzene	ND	15	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,4-Dichlorobenzene	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Dichlorodifluoromethane	ND	100	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1-Dichloroethane	ND	40	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1-Dichloroethene	ND	8.1	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2-Dichloropropane	ND	10	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,3-Dichloropropane	ND	17	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
2,2-Dichloropropane	ND	16	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1-Dichloropropene	ND	9.3	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Hexachlorobutadiene	ND	80	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
2-Hexanone	ND	66	1000		µg/L	100	2/22/2018 6:27:43 AM	W49304
Isopropylbenzene	13	5.1	100	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
4-Isopropyltoluene	ND	9.6	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	2/22/2018 6:27:43 AM	W49304
Methylene Chloride	ND	11	300		µg/L	100	2/22/2018 6:27:43 AM	W49304
n-Butylbenzene	25	13	300	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
n-Propylbenzene	52	7.4	100	J	µg/L	100	2/22/2018 6:27:43 AM	W49304
sec-Butylbenzene	ND	11	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Styrene	ND	16	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
tert-Butylbenzene	ND	10	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
trans-1,2-DCE	ND	18	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,1,2-Trichloroethane	ND	14	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Trichloroethene (TCE)	ND	11	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Trichlorofluoromethane	ND	18	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
1,2,3-Trichloropropane	ND	39	200		µg/L	100	2/22/2018 6:27:43 AM	W49304
Vinyl chloride	ND	18	100		µg/L	100	2/22/2018 6:27:43 AM	W49304
Xylenes, Total	12000	32	150		µg/L	100	2/22/2018 6:27:43 AM	W49304
Surr: 1,2-Dichloroethane-d4	94.2	0	70-130		%Rec	100	2/22/2018 6:27:43 AM	W49304
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	100	2/22/2018 6:27:43 AM	W49304
Surr: Dibromofluoromethane	94.0	0	70-130		%Rec	100	2/22/2018 6:27:43 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 10:10:00 AM
Lab ID: 1802951-002 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	97.6	0	70-130		%Rec	100	2/22/2018 6:27:43 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	79	0.97	5.0		mg/L	100	2/20/2018 6:32:59 PM	G49265
Surr: BFB	102	0	70-130		%Rec	100	2/20/2018 6:32:59 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.2	0.63	1.0		mg/L	1	2/20/2018 1:28:21 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 1:28:21 PM	36596
Surr: DNOP	118	0	77.5-161		%Rec	1	2/20/2018 1:28:21 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/16/2018 10:48:08 PM	R49185
Chloride	210	5.0	10		mg/L	20	2/16/2018 11:00:33 PM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 10:48:08 PM	R49185
Bromide	2.0	0.073	0.50		mg/L	5	3/3/2018 1:16:16 AM	R49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 10:48:08 PM	R49185
Phosphorus, Orthophosphate (As P)	2.2	1.2	2.5	J	mg/L	5	2/16/2018 10:48:08 PM	R49185
Sulfate	23	0.48	2.5		mg/L	5	2/16/2018 10:48:08 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.5	0.0049	0.010	*	mg/L	5	2/21/2018 8:09:26 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:57:26 PM	B49271
Calcium	210	0.39	5.0		mg/L	5	2/21/2018 8:09:26 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:57:26 PM	B49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 10:57:26 PM	B49271
Iron	9.2	0.33	0.40	*	mg/L	20	2/27/2018 6:29:39 PM	B49429
Magnesium	34	0.25	1.0		mg/L	1	2/20/2018 10:57:26 PM	B49271
Manganese	5.2	0.0039	0.020	*	mg/L	10	2/21/2018 8:17:21 PM	A49287
Potassium	15	0.11	1.0		mg/L	1	2/20/2018 10:57:26 PM	B49271
Silver	0.0025	0.0018	0.0050	J	mg/L	1	2/20/2018 10:57:26 PM	B49271
Sodium	150	0.82	5.0		mg/L	5	2/21/2018 8:09:26 PM	A49287
Zinc	0.026	0.0021	0.010		mg/L	1	2/21/2018 8:07:36 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.9	0.0050	0.010	*	mg/L	5	3/1/2018 9:54:53 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:23:05 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:23:05 PM	36715
Copper	0.013	0.0041	0.0060		mg/L	1	2/28/2018 7:23:05 PM	36715
Iron	20	0.20	0.40	*	mg/L	20	3/5/2018 1:56:51 PM	36715
Manganese	5.0	0.022	0.040	*	mg/L	20	3/5/2018 1:56:51 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:23:05 PM	36715
Zinc	0.12	0.0033	0.010		mg/L	1	3/1/2018 9:53:15 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	3/1/2018 8:16:19 PM	R49492
Lead	0.00034	0.00017	0.00050	J	mg/L	1	2/26/2018 10:39:01 PM	D49385
Selenium	0.0074	0.0038	0.0050		mg/L	5	3/1/2018 8:16:19 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0038	0.000096	0.00050		mg/L	1	2/26/2018 10:39:01 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	2/28/2018 8:18:53 PM	36715
Lead	0.0018	0.00023	0.00050		mg/L	1	2/27/2018 3:37:03 PM	36715
Selenium	0.0087	0.0049	0.0050		mg/L	5	3/2/2018 12:10:15 PM	36715
Uranium	0.0055	0.000068	0.00050		mg/L	1	2/27/2018 3:37:03 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 6:18:24 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Acenaphthylene	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Aniline	ND	15	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Anthracene	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Azobenzene	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benz(a)anthracene	ND	19	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzo(a)pyrene	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzo(b)fluoranthene	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzo(g,h,i)perylene	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzo(k)fluoranthene	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzoic acid	48	20	100	JD	µg/L	1	3/1/2018 7:07:03 PM	36609
Benzyl alcohol	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Bis(2-chloroethoxy)methane	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Bis(2-chloroethyl)ether	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Bis(2-chloroisopropyl)ether	ND	19	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Bis(2-ethylhexyl)phthalate	110	24	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Bromophenyl phenyl ether	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Butyl benzyl phthalate	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Carbazole	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Chloro-3-methylphenol	ND	32	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Chloroaniline	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Chloronaphthalene	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Chlorophenol	ND	38	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Chlorophenyl phenyl ether	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Chrysene	ND	19	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Di-n-butyl phthalate	ND	25	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Di-n-octyl phthalate	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Dibenz(a,h)anthracene	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Dibenzofuran	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
1,3-Dichlorobenzene	ND	9.1	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
1,4-Dichlorobenzene	ND	11	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
3,3´-Dichlorobenzidine	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Diethyl phthalate	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Dimethyl phthalate	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4-Dichlorophenol	ND	28	100	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4-Dimethylphenol	17	14	50	JD	µg/L	1	3/1/2018 7:07:03 PM	36609
4,6-Dinitro-2-methylphenol	ND	19	100	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4-Dinitrophenol	ND	13	100	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4-Dinitrotoluene	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,6-Dinitrotoluene	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Fluoranthene	ND	21	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Fluorene	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Hexachlorobenzene	ND	19	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Hexachlorobutadiene	ND	6.7	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Hexachlorocyclopentadiene	ND	6.4	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Hexachloroethane	ND	6.0	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Indeno(1,2,3-cd)pyrene	ND	21	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Isophorone	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
1-Methylnaphthalene	ND	17	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Methylnaphthalene	26	16	50	JD	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Methylphenol	ND	17	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
3+4-Methylphenol	ND	16	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
N-Nitrosodi-n-propylamine	ND	23	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
N-Nitrosodimethylamine	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
N-Nitrosodiphenylamine	ND	19	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Naphthalene	40	14	50	JD	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Nitroaniline	ND	25	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
3-Nitroaniline	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Nitroaniline	ND	20	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Nitrobenzene	ND	18	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2-Nitrophenol	ND	26	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
4-Nitrophenol	ND	27	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Pentachlorophenol	ND	25	100	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Phenanthrene	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Phenol	35	16	50	JD	µg/L	1	3/1/2018 7:07:03 PM	36609
Pyrene	ND	22	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Pyridine	ND	11	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	11	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4,5-Trichlorophenol	ND	26	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
2,4,6-Trichlorophenol	ND	27	50	D	µg/L	1	3/1/2018 7:07:03 PM	36609
Surr: 2-Fluorophenol	30.6	0	15-114	D	%Rec	1	3/1/2018 7:07:03 PM	36609
Surr: Phenol-d5	23.2	0	15-97.9	D	%Rec	1	3/1/2018 7:07:03 PM	36609
Surr: 2,4,6-Tribromophenol	50.3	0	15-161	D	%Rec	1	3/1/2018 7:07:03 PM	36609
Surr: Nitrobenzene-d5	59.5	0	29.3-120	D	%Rec	1	3/1/2018 7:07:03 PM	36609
Surr: 2-Fluorobiphenyl	35.7	0	17.5-116	D	%Rec	1	3/1/2018 7:07:03 PM	36609
Surr: 4-Terphenyl-d14	32.4	0	21-92.2	D	%Rec	1	3/1/2018 7:07:03 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	3400	12	200		µg/L	200	2/22/2018 6:58:21 AM	W49304
Toluene	3.5	1.3	20	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
Ethylbenzene	310	1.9	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Methyl tert-butyl ether (MTBE)	390	4.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2,4-Trimethylbenzene	220	2.3	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,3,5-Trimethylbenzene	46	1.7	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Naphthalene	43	2.3	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
1-Methylnaphthalene	13	3.2	80	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
2-Methylnaphthalene	13	3.0	80	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
Acetone	52	16	200	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
Bromobenzene	ND	2.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Bromodichloromethane	ND	3.5	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Bromoform	ND	4.2	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Bromomethane	ND	5.1	60		µg/L	20	2/22/2018 7:27:55 AM	W49304
2-Butanone	ND	23	200		µg/L	20	2/22/2018 7:27:55 AM	W49304
Carbon disulfide	ND	8.0	200		µg/L	20	2/22/2018 7:27:55 AM	W49304
Carbon Tetrachloride	ND	2.2	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Chlorobenzene	ND	2.1	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Chloroethane	ND	4.7	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
Chloroform	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Chloromethane	ND	5.9	60		µg/L	20	2/22/2018 7:27:55 AM	W49304
2-Chlorotoluene	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
4-Chlorotoluene	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
cis-1,2-DCE	ND	4.1	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
Dibromochloromethane	ND	1.4	20		µg/L	20	2/22/2018 7:27:55 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	1.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Dichlorodifluoromethane	ND	20	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1-Dichloroethane	ND	8.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1-Dichloroethene	ND	1.6	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2-Dichloropropane	ND	2.0	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,3-Dichloropropane	ND	3.3	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
2,2-Dichloropropane	ND	3.1	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1-Dichloropropene	ND	1.9	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Hexachlorobutadiene	ND	16	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
2-Hexanone	17	13	200	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
Isopropylbenzene	7.4	1.0	20	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
4-Isopropyltoluene	ND	1.9	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
4-Methyl-2-pentanone	23	14	200	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
Methylene Chloride	ND	2.2	60		µg/L	20	2/22/2018 7:27:55 AM	W49304
n-Butylbenzene	4.9	2.6	60	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
n-Propylbenzene	15	1.5	20	J	µg/L	20	2/22/2018 7:27:55 AM	W49304
sec-Butylbenzene	ND	2.2	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Styrene	ND	3.1	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
tert-Butylbenzene	ND	2.1	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
trans-1,2-DCE	ND	3.7	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Trichlorofluoromethane	ND	3.7	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	2/22/2018 7:27:55 AM	W49304
Vinyl chloride	ND	3.6	20		µg/L	20	2/22/2018 7:27:55 AM	W49304
Xylenes, Total	390	6.4	30		µg/L	20	2/22/2018 7:27:55 AM	W49304
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	20	2/22/2018 7:27:55 AM	W49304
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	20	2/22/2018 7:27:55 AM	W49304
Surr: Dibromofluoromethane	106	0	70-130		%Rec	20	2/22/2018 7:27:55 AM	W49304

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 11:00:00 AM
Lab ID: 1802951-003 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	101	0	70-130		%Rec	20	2/22/2018 7:27:55 AM	W49304
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	12	0.48	2.5		mg/L	50	2/20/2018 6:55:56 PM	G49265
Surr: BFB	105	0	70-130		%Rec	50	2/20/2018 6:55:56 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	2/22/2018 4:52:59 PM	36656
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	10	0.63	1.0		mg/L	1	2/20/2018 1:56:14 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 1:56:14 PM	36596
Surr: DNOP	123	0	77.5-161		%Rec	1	2/20/2018 1:56:14 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.62	0.22	0.50		mg/L	5	2/16/2018 11:12:57 PM	R49185
Chloride	180	5.0	10		mg/L	20	2/16/2018 11:25:22 PM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 11:12:57 PM	R49185
Bromide	0.99	0.073	0.50		mg/L	5	3/3/2018 1:28:41 AM	R49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 11:12:57 PM	R49185
Phosphorus, Orthophosphate (As P)	2.7	1.2	2.5		mg/L	5	2/16/2018 11:12:57 PM	R49185
Sulfate	ND	0.48	2.5		mg/L	5	2/16/2018 11:12:57 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	5.8	0.020	0.040	*	mg/L	20	2/21/2018 8:24:52 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 10:59:10 PM	B49271
Calcium	130	0.39	5.0		mg/L	5	2/21/2018 8:20:59 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 10:59:10 PM	B49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 10:59:10 PM	B49271
Iron	14	0.33	0.40	*	mg/L	20	2/21/2018 8:24:52 PM	A49287
Magnesium	35	0.25	1.0		mg/L	1	2/20/2018 10:59:10 PM	B49271
Manganese	1.9	0.0020	0.010	*	mg/L	5	2/21/2018 8:20:59 PM	A49287
Potassium	0.61	0.11	1.0	J	mg/L	1	2/20/2018 10:59:10 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 10:59:10 PM	B49271
Sodium	210	0.82	5.0		mg/L	5	2/21/2018 8:20:59 PM	A49287
Zinc	0.0060	0.0021	0.010	J	mg/L	1	2/21/2018 8:19:05 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	6.4	0.020	0.040	*	mg/L	20	3/1/2018 10:01:05 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:34:32 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:34:32 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:34:32 PM	36715
Iron	15	0.20	0.40	*	mg/L	20	3/1/2018 10:01:05 PM	36715
Manganese	1.8	0.0055	0.010	*	mg/L	5	3/1/2018 9:59:26 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:34:32 PM	36715
Zinc	0.010	0.0033	0.010		mg/L	1	3/1/2018 9:57:45 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0085	0.00042	0.0010		mg/L	1	3/1/2018 8:20:26 PM	C49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.0020	0.00017	0.00050		mg/L	1	2/26/2018 10:43:55 PM	D49385
Selenium	0.0037	0.00076	0.0010		mg/L	1	3/1/2018 8:20:26 PM	C49492
Uranium	ND	0.000096	0.00050		mg/L	1	2/26/2018 10:43:55 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0087	0.00041	0.0010		mg/L	1	2/27/2018 3:41:58 PM	36715
Lead	0.0053	0.00023	0.00050		mg/L	1	2/27/2018 3:41:58 PM	36715
Selenium	0.0028	0.00098	0.0010		mg/L	1	3/2/2018 12:15:09 PM	36715
Uranium	0.00016	0.000068	0.00050	J	mg/L	1	2/27/2018 3:41:58 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 6:20:38 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	9.7	3.6	10	J	µg/L	1	3/1/2018 7:34:30 PM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Aniline	ND	3.1	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzoic acid	ND	3.9	20		µg/L	1	3/1/2018 7:34:30 PM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Bis(2-ethylhexyl)phthalate	5.2	4.8	10	J	µg/L	1	3/1/2018 7:34:30 PM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Carbazole	8.3	4.6	10	J	µg/L	1	3/1/2018 7:34:30 PM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 7:34:30 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Dibenzofuran	4.5	4.1	10	J	µg/L	1	3/1/2018 7:34:30 PM	36609
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 7:34:30 PM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 7:34:30 PM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 7:34:30 PM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Fluorene	14	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 7:34:30 PM	36609
1-Methylnaphthalene	310	33	100		µg/L	10	3/2/2018 10:41:18 AM	36609
2-Methylnaphthalene	450	33	100		µg/L	10	3/2/2018 10:41:18 AM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 7:34:30 PM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Naphthalene	440	29	100		µg/L	10	3/2/2018 10:41:18 AM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 7:34:30 PM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 7:34:30 PM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 7:34:30 PM	36609
Phenanthrene	8.6	4.3	10	J	µg/L	1	3/1/2018 7:34:30 PM	36609
Phenol	67	3.1	10		µg/L	1	3/1/2018 7:34:30 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 7:34:30 PM	36609
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 7:34:30 PM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 7:34:30 PM	36609
Surr: 2-Fluorophenol	52.9	0	15-114		%Rec	1	3/1/2018 7:34:30 PM	36609
Surr: Phenol-d5	46.2	0	15-97.9		%Rec	1	3/1/2018 7:34:30 PM	36609
Surr: 2,4,6-Tribromophenol	89.7	0	15-161		%Rec	1	3/1/2018 7:34:30 PM	36609
Surr: Nitrobenzene-d5	82.2	0	29.3-120		%Rec	1	3/1/2018 7:34:30 PM	36609
Surr: 2-Fluorobiphenyl	74.1	0	17.5-116		%Rec	1	3/1/2018 7:34:30 PM	36609
Surr: 4-Terphenyl-d14	50.3	0	21-92.2		%Rec	1	3/1/2018 7:34:30 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	8400	31	500		µg/L	500	2/22/2018 6:44:18 PM	R49323
Toluene	20	3.2	50	J	µg/L	50	2/22/2018 7:13:42 PM	R49323
Ethylbenzene	1500	4.7	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Methyl tert-butyl ether (MTBE)	2500	12	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2,4-Trimethylbenzene	39	5.6	50	J	µg/L	50	2/22/2018 7:13:42 PM	R49323
1,3,5-Trimethylbenzene	4.8	4.4	50	J	µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Naphthalene	600	5.7	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
1-Methylnaphthalene	340	8.0	200		µg/L	50	2/22/2018 7:13:42 PM	R49323
2-Methylnaphthalene	460	7.6	200		µg/L	50	2/22/2018 7:13:42 PM	R49323
Acetone	ND	41	500		µg/L	50	2/22/2018 7:13:42 PM	R49323
Bromobenzene	ND	7.0	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Bromodichloromethane	ND	8.8	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Bromoform	ND	11	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Bromomethane	ND	13	150		µg/L	50	2/22/2018 7:13:42 PM	R49323
2-Butanone	ND	57	500		µg/L	50	2/22/2018 7:13:42 PM	R49323
Carbon disulfide	ND	20	500		µg/L	50	2/22/2018 7:13:42 PM	R49323
Carbon Tetrachloride	ND	5.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Chlorobenzene	ND	5.3	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Chloroethane	ND	12	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
Chloroform	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Chloromethane	ND	15	150		µg/L	50	2/22/2018 7:13:42 PM	R49323
2-Chlorotoluene	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
4-Chlorotoluene	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
cis-1,2-DCE	ND	10	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	2/22/2018 7:13:42 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
Dibromochloromethane	ND	3.6	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Dibromomethane	ND	4.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,4-Dichlorobenzene	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Dichlorodifluoromethane	ND	50	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1-Dichloroethane	ND	20	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1-Dichloroethene	ND	4.0	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2-Dichloropropane	ND	5.1	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,3-Dichloropropane	ND	8.4	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
2,2-Dichloropropane	ND	7.9	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1-Dichloropropene	ND	4.6	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Hexachlorobutadiene	ND	40	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
2-Hexanone	ND	33	500		µg/L	50	2/22/2018 7:13:42 PM	R49323
Isopropylbenzene	35	2.6	50	J	µg/L	50	2/22/2018 7:13:42 PM	R49323
4-Isopropyltoluene	ND	4.8	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
4-Methyl-2-pentanone	ND	35	500		µg/L	50	2/22/2018 7:13:42 PM	R49323
Methylene Chloride	ND	5.4	150		µg/L	50	2/22/2018 7:13:42 PM	R49323
n-Butylbenzene	11	6.5	150	J	µg/L	50	2/22/2018 7:13:42 PM	R49323
n-Propylbenzene	74	3.7	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
sec-Butylbenzene	ND	5.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Styrene	ND	7.8	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
tert-Butylbenzene	ND	5.2	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
trans-1,2-DCE	ND	9.2	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Trichlorofluoromethane	ND	9.1	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
1,2,3-Trichloropropane	ND	19	100		µg/L	50	2/22/2018 7:13:42 PM	R49323
Vinyl chloride	ND	8.9	50		µg/L	50	2/22/2018 7:13:42 PM	R49323
Xylenes, Total	160	16	75		µg/L	50	2/22/2018 7:13:42 PM	R49323
Surr: 1,2-Dichloroethane-d4	99.5	0	70-130		%Rec	50	2/22/2018 7:13:42 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 4:10:00 PM
Lab ID: 1802951-004 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	50	2/22/2018 7:13:42 PM	R49323
Surr: Dibromofluoromethane	103	0	70-130		%Rec	50	2/22/2018 7:13:42 PM	R49323
Surr: Toluene-d8	101	0	70-130		%Rec	50	2/22/2018 7:13:42 PM	R49323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	27	0.97	5.0		mg/L	100	2/20/2018 7:18:58 PM	G49265
Surr: BFB	117	0	70-130		%Rec	100	2/20/2018 7:18:58 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	2/22/2018 5:38:30 PM	36656
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.94	0.63	1.0	J	mg/L	1	2/20/2018 2:51:44 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 2:51:44 PM	36596
Surr: DNOP	134	0	77.5-161		%Rec	1	2/20/2018 2:51:44 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.68	0.22	0.50		mg/L	5	2/16/2018 11:37:46 PM	R49185
Chloride	180	5.0	10		mg/L	20	2/16/2018 11:50:11 PM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/16/2018 11:37:46 PM	R49185
Bromide	1.3	0.073	0.50		mg/L	5	3/3/2018 1:41:06 AM	R49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/16/2018 11:37:46 PM	R49185
Phosphorus, Orthophosphate (As P)	1.8	1.2	2.5	J	mg/L	5	2/16/2018 11:37:46 PM	R49185
Sulfate	37	0.48	2.5		mg/L	5	2/16/2018 11:37:46 PM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.26	0.00099	0.0020		mg/L	1	2/20/2018 11:00:58 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:00:58 PM	B49271
Calcium	140	0.39	5.0		mg/L	5	2/21/2018 8:28:37 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/20/2018 11:00:58 PM	B49271
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:00:58 PM	B49271
Iron	3.2	0.082	0.10	*	mg/L	5	2/21/2018 8:28:37 PM	A49287
Magnesium	39	0.25	1.0		mg/L	1	2/20/2018 11:00:58 PM	B49271
Manganese	3.4	0.0020	0.010	*	mg/L	5	2/21/2018 8:28:37 PM	A49287
Potassium	0.36	0.11	1.0	J	mg/L	1	2/20/2018 11:00:58 PM	B49271
Silver	0.0025	0.0018	0.0050	J	mg/L	1	2/20/2018 11:00:58 PM	B49271
Sodium	170	0.82	5.0		mg/L	5	2/21/2018 8:28:37 PM	A49287
Zinc	ND	0.011	0.050		mg/L	5	2/21/2018 8:28:37 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.3	0.0050	0.010		mg/L	5	3/1/2018 10:04:30 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:36:24 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:36:24 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:36:24 PM	36715
Iron	6.2	0.10	0.20	*	mg/L	10	3/1/2018 10:06:09 PM	36715
Manganese	3.4	0.0055	0.010	*	mg/L	5	3/1/2018 10:04:30 PM	36715
Silver	0.0023	0.0012	0.0050	J	mg/L	1	2/28/2018 7:36:24 PM	36715
Zinc	0.012	0.0033	0.010		mg/L	1	3/1/2018 10:02:47 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0023	0.0021	0.0050	J	mg/L	5	3/1/2018 8:24:33 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.00020	0.00017	0.00050	J	mg/L	1	2/26/2018 10:48:50 PM	D49385
Selenium	ND	0.0076	0.010		mg/L	10	3/5/2018 9:32:05 PM	C49567
Uranium	0.0028	0.000096	0.00050		mg/L	1	2/26/2018 10:48:50 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0034	0.00041	0.0010		mg/L	1	2/27/2018 3:46:52 PM	36715
Lead	0.0045	0.00023	0.00050		mg/L	1	2/27/2018 3:46:52 PM	36715
Selenium	0.0041	0.00098	0.0010		mg/L	1	3/2/2018 12:20:03 PM	36715
Uranium	0.0034	0.000068	0.00050		mg/L	1	2/27/2018 3:46:52 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/1/2018 6:22:52 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Aniline	ND	3.1	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Benzoic acid	8.0	3.9	20	J	µg/L	1	3/1/2018 8:01:51 PM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Bis(2-ethylhexyl)phthalate	6.7	4.8	10	J	µg/L	1	3/1/2018 8:01:51 PM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 8:01:51 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 8:01:51 PM	36609
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 8:01:51 PM	36609
1,4-Dichlorobenzene	3.1	2.1	10	J	µg/L	1	3/1/2018 8:01:51 PM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 8:01:51 PM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 8:01:51 PM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Naphthalene	ND	2.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 8:01:51 PM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 8:01:51 PM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 8:01:51 PM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Phenol	ND	3.1	10		µg/L	1	3/1/2018 8:01:51 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 8:01:51 PM	36609
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 8:01:51 PM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 8:01:51 PM	36609
Surr: 2-Fluorophenol	50.3	0	15-114		%Rec	1	3/1/2018 8:01:51 PM	36609
Surr: Phenol-d5	40.9	0	15-97.9		%Rec	1	3/1/2018 8:01:51 PM	36609
Surr: 2,4,6-Tribromophenol	79.7	0	15-161		%Rec	1	3/1/2018 8:01:51 PM	36609
Surr: Nitrobenzene-d5	75.6	0	29.3-120		%Rec	1	3/1/2018 8:01:51 PM	36609
Surr: 2-Fluorobiphenyl	68.7	0	17.5-116		%Rec	1	3/1/2018 8:01:51 PM	36609
Surr: 4-Terphenyl-d14	51.0	0	21-92.2		%Rec	1	3/1/2018 8:01:51 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2.4	0.062	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Toluene	3.4	0.064	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Ethylbenzene	0.38	0.093	1.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
Methyl tert-butyl ether (MTBE)	78	0.24	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Naphthalene	ND	0.11	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Acetone	0.86	0.82	10	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
Bromobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Bromoform	ND	0.21	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Bromomethane	ND	0.26	3.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
2-Butanone	ND	1.1	10		µg/L	1	2/24/2018 9:35:18 AM	W49368
Carbon disulfide	ND	0.40	10		µg/L	1	2/24/2018 9:35:18 AM	W49368
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Chlorobenzene	0.49	0.11	1.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
Chloroethane	ND	0.23	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Chloroform	ND	0.40	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Chloromethane	ND	0.29	3.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Dibromomethane	ND	0.091	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,4-Dichlorobenzene	3.9	0.40	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1-Dichloroethane	0.94	0.40	1.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
2-Hexanone	ND	0.66	10		µg/L	1	2/24/2018 9:35:18 AM	W49368
Isopropylbenzene	0.49	0.051	1.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/24/2018 9:35:18 AM	W49368
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
n-Butylbenzene	0.30	0.13	3.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
n-Propylbenzene	0.44	0.074	1.0	J	µg/L	1	2/24/2018 9:35:18 AM	W49368
sec-Butylbenzene	1.5	0.11	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Styrene	ND	0.16	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/24/2018 9:35:18 AM	W49368
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/24/2018 9:35:18 AM	W49368
Surr: 1,2-Dichloroethane-d4	92.3	0	70-130		%Rec	1	2/24/2018 9:35:18 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018 5:00:00 PM
Lab ID: 1802951-005 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	2/24/2018 9:35:18 AM	W49368
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	2/24/2018 9:35:18 AM	W49368
Surr: Toluene-d8	101	0	70-130		%Rec	1	2/24/2018 9:35:18 AM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.37	0.0097	0.050		mg/L	1	2/20/2018 8:51:01 PM	G49265
Surr: BFB	114	0	70-130		%Rec	1	2/20/2018 8:51:01 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.5	0.63	1.0		mg/L	1	2/20/2018 3:19:18 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 3:19:18 PM	36596
Surr: DNOP	130	0	77.5-161		%Rec	1	2/20/2018 3:19:18 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	4.8	0.22	0.50	*	mg/L	5	2/17/2018 12:27:24 AM	R49185
Chloride	800	25	50		mg/L	100	3/3/2018 2:05:54 AM	R49521
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 12:27:24 AM	R49185
Bromide	ND	0.073	0.50		mg/L	5	3/3/2018 1:53:30 AM	R49521
Nitrogen, Nitrate (As N)	0.13	0.11	0.50	J	mg/L	5	2/17/2018 12:27:24 AM	R49185
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/17/2018 12:27:24 AM	R49185
Sulfate	59	0.48	2.5		mg/L	5	2/17/2018 12:27:24 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.66	0.00099	0.0020		mg/L	1	2/20/2018 11:09:36 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:09:36 PM	B49271
Calcium	63	0.078	1.0		mg/L	1	2/20/2018 11:09:36 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 8:30:28 PM	A49287
Copper	0.018	0.0032	0.0060		mg/L	1	2/20/2018 11:09:36 PM	B49271
Iron	0.095	0.016	0.020		mg/L	1	2/20/2018 11:09:36 PM	B49271
Magnesium	5.9	0.25	1.0		mg/L	1	2/20/2018 11:09:36 PM	B49271
Manganese	0.37	0.00039	0.0020	*	mg/L	1	2/20/2018 11:09:36 PM	B49271
Potassium	17	0.11	1.0		mg/L	1	2/20/2018 11:09:36 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 11:09:36 PM	B49271
Sodium	570	1.6	10		mg/L	10	2/21/2018 8:32:38 PM	A49287
Zinc	0.070	0.0021	0.010		mg/L	1	2/21/2018 8:30:28 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.5	0.0050	0.010		mg/L	5	3/1/2018 10:18:37 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:38:17 PM	36715
Chromium	0.020	0.0018	0.0060		mg/L	1	2/28/2018 7:38:17 PM	36715
Copper	0.073	0.0041	0.0060		mg/L	1	2/28/2018 7:38:17 PM	36715
Iron	15	0.20	0.40	*	mg/L	20	3/1/2018 10:20:14 PM	36715
Manganese	0.70	0.0011	0.0020	*	mg/L	1	2/28/2018 7:38:17 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:38:17 PM	36715
Zinc	0.25	0.0033	0.010		mg/L	1	3/1/2018 10:08:00 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0024	0.00042	0.0010		mg/L	1	3/1/2018 8:32:46 PM	C49492
Lead	0.00036	0.00017	0.00050	J	mg/L	1	3/1/2018 8:32:46 PM	C49492
Selenium	0.0023	0.00076	0.0010		mg/L	1	3/1/2018 8:32:46 PM	C49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0022	0.000096	0.00050		mg/L	1	3/1/2018 8:32:46 PM	C49492
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0061	0.00041	0.0010		mg/L	1	2/27/2018 3:51:47 PM	36715
Lead	0.024	0.00023	0.00050	*	mg/L	1	2/27/2018 3:51:47 PM	36715
Selenium	0.0028	0.00098	0.0010		mg/L	1	3/2/2018 12:24:58 PM	36715
Uranium	0.0056	0.000068	0.00050		mg/L	1	2/27/2018 3:51:47 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00046	0.000037	0.00020		mg/L	1	3/1/2018 6:25:06 PM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Aniline	ND	3.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Benzoic acid	8.4	3.9	20	J	µg/L	1	3/1/2018 8:29:16 PM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Bis(2-ethylhexyl)phthalate	5.6	4.8	10	J	µg/L	1	3/1/2018 8:29:16 PM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 8:29:16 PM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 8:29:16 PM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 8:29:16 PM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Naphthalene	3.4	2.9	10	J	µg/L	1	3/1/2018 8:29:16 PM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 8:29:16 PM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 8:29:16 PM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 8:29:16 PM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Phenol	21	3.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 8:29:16 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 8:29:16 PM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 8:29:16 PM	36609
Surr: 2-Fluorophenol	21.7	0	15-114		%Rec	1	3/1/2018 8:29:16 PM	36609
Surr: Phenol-d5	16.3	0	15-97.9		%Rec	1	3/1/2018 8:29:16 PM	36609
Surr: 2,4,6-Tribromophenol	38.7	0	15-161		%Rec	1	3/1/2018 8:29:16 PM	36609
Surr: Nitrobenzene-d5	34.6	0	29.3-120		%Rec	1	3/1/2018 8:29:16 PM	36609
Surr: 2-Fluorobiphenyl	27.6	0	17.5-116		%Rec	1	3/1/2018 8:29:16 PM	36609
Surr: 4-Terphenyl-d14	21.7	0	21-92.2		%Rec	1	3/1/2018 8:29:16 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2000	1.2	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Toluene	23	1.3	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Ethylbenzene	15	1.9	20	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
Methyl tert-butyl ether (MTBE)	38	4.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2,4-Trimethylbenzene	25	2.3	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,3,5-Trimethylbenzene	42	1.7	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Naphthalene	11	2.3	40	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
1-Methylnaphthalene	12	3.2	80	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
2-Methylnaphthalene	ND	3.0	80		µg/L	20	2/22/2018 9:11:52 PM	R49323
Acetone	23	16	200	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
Bromobenzene	ND	2.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Bromodichloromethane	ND	3.5	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Bromoform	ND	4.2	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Bromomethane	ND	5.1	60		µg/L	20	2/22/2018 9:11:52 PM	R49323
2-Butanone	ND	23	200		µg/L	20	2/22/2018 9:11:52 PM	R49323
Carbon disulfide	ND	8.0	200		µg/L	20	2/22/2018 9:11:52 PM	R49323
Carbon Tetrachloride	ND	2.2	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Chlorobenzene	ND	2.1	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Chloroethane	ND	4.7	40		µg/L	20	2/22/2018 9:11:52 PM	R49323
Chloroform	ND	8.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Chloromethane	ND	5.9	60		µg/L	20	2/22/2018 9:11:52 PM	R49323
2-Chlorotoluene	ND	8.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
4-Chlorotoluene	ND	8.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
cis-1,2-DCE	ND	4.1	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	2/22/2018 9:11:52 PM	R49323
Dibromochloromethane	ND	1.4	20		µg/L	20	2/22/2018 9:11:52 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	1.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Dichlorodifluoromethane	ND	20	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1-Dichloroethane	9.3	8.0	20	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1-Dichloroethene	ND	1.6	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2-Dichloropropane	ND	2.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,3-Dichloropropane	ND	3.3	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
2,2-Dichloropropane	ND	3.1	40		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1-Dichloropropene	ND	1.9	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Hexachlorobutadiene	ND	16	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
2-Hexanone	ND	13	200		µg/L	20	2/22/2018 9:11:52 PM	R49323
Isopropylbenzene	ND	1.0	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
4-Isopropyltoluene	ND	1.9	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
4-Methyl-2-pentanone	ND	14	200		µg/L	20	2/22/2018 9:11:52 PM	R49323
Methylene Chloride	ND	2.2	60		µg/L	20	2/22/2018 9:11:52 PM	R49323
n-Butylbenzene	2.8	2.6	60	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
n-Propylbenzene	ND	1.5	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
sec-Butylbenzene	ND	2.2	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Styrene	ND	3.1	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
tert-Butylbenzene	ND	2.1	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	2/22/2018 9:11:52 PM	R49323
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
trans-1,2-DCE	ND	3.7	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
Trichlorofluoromethane	ND	3.7	20		µg/L	20	2/22/2018 9:11:52 PM	R49323
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	2/22/2018 9:11:52 PM	R49323
Vinyl chloride	8.5	3.6	20	J	µg/L	20	2/22/2018 9:11:52 PM	R49323
Xylenes, Total	220	6.4	30		µg/L	20	2/22/2018 9:11:52 PM	R49323
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	20	2/22/2018 9:11:52 PM	R49323
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	20	2/22/2018 9:11:52 PM	R49323
Surr: Dibromofluoromethane	105	0	70-130		%Rec	20	2/22/2018 9:11:52 PM	R49323

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/15/2018
Lab ID: 1802951-006 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	99.3	0	70-130		%Rec	20	2/22/2018 9:11:52 PM	R49323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	7.4	0.19	1.0		mg/L	20	2/21/2018 12:44:24 PM	W49276
Surr: BFB	111	0	70-130		%Rec	20	2/21/2018 12:44:24 PM	W49276

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date:
Lab ID: 1802951-007
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Toluene	ND	0.064	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Naphthalene	ND	0.11	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Acetone	ND	0.82	10		µg/L	1	2/24/2018 9:06:19 AM	W49368
Bromobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Bromoform	ND	0.21	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Bromomethane	ND	0.26	3.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
2-Butanone	ND	1.1	10		µg/L	1	2/24/2018 9:06:19 AM	W49368
Carbon disulfide	ND	0.40	10		µg/L	1	2/24/2018 9:06:19 AM	W49368
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Chloroethane	ND	0.23	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Chloroform	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Chloromethane	ND	0.29	3.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Dibromomethane	ND	0.091	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date:
Lab ID: 1802951-007 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
2-Hexanone	ND	0.66	10		µg/L	1	2/24/2018 9:06:19 AM	W49368
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/24/2018 9:06:19 AM	W49368
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Styrene	ND	0.16	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/24/2018 9:06:19 AM	W49368
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/24/2018 9:06:19 AM	W49368
Surr: 1,2-Dichloroethane-d4	93.7	0	70-130		%Rec	1	2/24/2018 9:06:19 AM	W49368
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	2/24/2018 9:06:19 AM	W49368
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	2/24/2018 9:06:19 AM	W49368
Surr: Toluene-d8	102	0	70-130		%Rec	1	2/24/2018 9:06:19 AM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/20/2018 10:00:06 PM	G49265
Surr: BFB	116	0	70-130		%Rec	1	2/20/2018 10:00:06 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	2/20/2018 3:46:46 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 3:46:46 PM	36596
Surr: DNOP	134	0	77.5-161		%Rec	1	2/20/2018 3:46:46 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.74	0.22	0.50		mg/L	5	2/17/2018 12:52:13 AM	R49185
Chloride	100	5.0	10		mg/L	20	2/17/2018 1:04:38 AM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 12:52:13 AM	R49185
Bromide	1.7	0.073	0.50		mg/L	5	3/3/2018 2:18:18 AM	R49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/17/2018 12:52:13 AM	R49185
Phosphorus, Orthophosphate (As P)	1.9	1.2	2.5	J	mg/L	5	2/17/2018 12:52:13 AM	R49185
Sulfate	52	0.48	2.5		mg/L	5	2/17/2018 12:52:13 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.44	0.00099	0.0020		mg/L	1	2/20/2018 11:11:33 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:11:33 PM	B49271
Calcium	98	0.078	1.0		mg/L	1	2/20/2018 11:11:33 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 8:34:32 PM	A49287
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:11:33 PM	B49271
Iron	0.13	0.016	0.020		mg/L	1	2/20/2018 11:11:33 PM	B49271
Magnesium	20	0.25	1.0		mg/L	1	2/20/2018 11:11:33 PM	B49271
Manganese	2.9	0.0020	0.010	*	mg/L	5	2/21/2018 8:45:52 PM	A49287
Potassium	0.68	0.11	1.0	J	mg/L	1	2/20/2018 11:11:33 PM	B49271
Silver	0.0024	0.0018	0.0050	J	mg/L	1	2/20/2018 11:11:33 PM	B49271
Sodium	270	0.82	5.0		mg/L	5	2/21/2018 8:45:52 PM	A49287
Zinc	0.0048	0.0021	0.010	J	mg/L	1	2/21/2018 8:34:32 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.44	0.0010	0.0020		mg/L	1	2/28/2018 7:40:09 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:40:09 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:40:09 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:40:09 PM	36715
Iron	1.7	0.051	0.10	*	mg/L	5	3/1/2018 10:23:42 PM	36715
Manganese	2.6	0.0055	0.010	*	mg/L	5	3/1/2018 10:23:42 PM	36715
Silver	0.0014	0.0012	0.0050	J	mg/L	1	2/28/2018 7:40:09 PM	36715
Zinc	ND	0.0033	0.010		mg/L	1	3/1/2018 10:22:02 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0067	0.0021	0.0050		mg/L	5	3/1/2018 8:36:52 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 11:08:35 PM	D49385
Selenium	ND	0.0076	0.010		mg/L	10	3/5/2018 9:46:36 PM	C49567

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0055	0.000096	0.00050		mg/L	1	2/26/2018 11:08:35 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0021	0.0021	0.0050	J	mg/L	5	2/28/2018 8:58:14 PM	36715
Lead	ND	0.00023	0.00050		mg/L	1	2/27/2018 3:56:42 PM	36715
Selenium	0.0085	0.0049	0.0050		mg/L	5	3/2/2018 12:29:54 PM	36715
Uranium	0.0055	0.000068	0.00050		mg/L	1	2/27/2018 3:56:42 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/2/2018 11:39:41 AM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Aniline	ND	3.1	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Anthracene	ND	3.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzoic acid	ND	3.9	20		µg/L	1	3/1/2018 8:56:37 PM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Carbazole	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Chrysene	ND	3.8	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/1/2018 8:56:37 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/1/2018 8:56:37 PM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 8:56:37 PM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Fluorene	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Isophorone	ND	4.4	10		µg/L	1	3/1/2018 8:56:37 PM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/1/2018 8:56:37 PM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Naphthalene	6.1	2.9	10	J	µg/L	1	3/1/2018 8:56:37 PM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/1/2018 8:56:37 PM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/1/2018 8:56:37 PM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/1/2018 8:56:37 PM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Phenol	7.1	3.1	10	J	µg/L	1	3/1/2018 8:56:37 PM	36609
Pyrene	ND	4.4	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Pyridine	ND	2.3	10		µg/L	1	3/1/2018 8:56:37 PM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/1/2018 8:56:37 PM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/1/2018 8:56:37 PM	36609
Surr: 2-Fluorophenol	63.9	0	15-114		%Rec	1	3/1/2018 8:56:37 PM	36609
Surr: Phenol-d5	49.9	0	15-97.9		%Rec	1	3/1/2018 8:56:37 PM	36609
Surr: 2,4,6-Tribromophenol	96.8	0	15-161		%Rec	1	3/1/2018 8:56:37 PM	36609
Surr: Nitrobenzene-d5	91.9	0	29.3-120		%Rec	1	3/1/2018 8:56:37 PM	36609
Surr: 2-Fluorobiphenyl	83.7	0	17.5-116		%Rec	1	3/1/2018 8:56:37 PM	36609
Surr: 4-Terphenyl-d14	53.9	0	21-92.2		%Rec	1	3/1/2018 8:56:37 PM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	220	0.31	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Toluene	0.98	0.32	5.0	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
Ethylbenzene	210	0.47	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Methyl tert-butyl ether (MTBE)	4900	12	50		µg/L	50	2/24/2018 11:31:32 AM	W49368
1,2,4-Trimethylbenzene	0.62	0.56	5.0	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Naphthalene	5.1	0.57	10	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
1-Methylnaphthalene	4.3	0.80	20	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
2-Methylnaphthalene	ND	0.76	20		µg/L	5	2/24/2018 12:00:48 PM	W49368
Acetone	ND	4.1	50		µg/L	5	2/24/2018 12:00:48 PM	W49368
Bromobenzene	ND	0.70	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Bromodichloromethane	ND	0.88	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Bromoform	ND	1.1	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Bromomethane	ND	1.3	15		µg/L	5	2/24/2018 12:00:48 PM	W49368
2-Butanone	ND	5.7	50		µg/L	5	2/24/2018 12:00:48 PM	W49368
Carbon disulfide	ND	2.0	50		µg/L	5	2/24/2018 12:00:48 PM	W49368
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Chlorobenzene	ND	0.53	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Chloroethane	ND	1.2	10		µg/L	5	2/24/2018 12:00:48 PM	W49368
Chloroform	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Chloromethane	ND	1.5	15		µg/L	5	2/24/2018 12:00:48 PM	W49368
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	2/24/2018 12:00:48 PM	W49368
Dibromochloromethane	ND	0.36	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.45	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
2,2-Dichloropropane	ND	0.79	10		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
2-Hexanone	ND	3.3	50		µg/L	5	2/24/2018 12:00:48 PM	W49368
Isopropylbenzene	9.9	0.26	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	2/24/2018 12:00:48 PM	W49368
Methylene Chloride	ND	0.54	15		µg/L	5	2/24/2018 12:00:48 PM	W49368
n-Butylbenzene	0.83	0.65	15	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
n-Propylbenzene	13	0.37	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
sec-Butylbenzene	1.5	0.55	5.0	J	µg/L	5	2/24/2018 12:00:48 PM	W49368
Styrene	ND	0.78	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	2/24/2018 12:00:48 PM	W49368
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	2/24/2018 12:00:48 PM	W49368
Vinyl chloride	ND	0.89	5.0		µg/L	5	2/24/2018 12:00:48 PM	W49368
Xylenes, Total	ND	1.6	7.5		µg/L	5	2/24/2018 12:00:48 PM	W49368
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	5	2/24/2018 12:00:48 PM	W49368
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	5	2/24/2018 12:00:48 PM	W49368
Surr: Dibromofluoromethane	104	0	70-130		%Rec	5	2/24/2018 12:00:48 PM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 7:30:00 AM
Lab ID: 1802951-008 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	100	0	70-130		%Rec	5	2/24/2018 12:00:48 PM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	3.7	0.097	0.50		mg/L	10	2/20/2018 10:22:59 PM	G49265
Surr: BFB	114	0	70-130		%Rec	10	2/20/2018 10:22:59 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	11	0.63	1.0		mg/L	1	2/20/2018 4:14:03 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 4:14:03 PM	36596
Surr: DNOP	135	0	77.5-161		%Rec	1	2/20/2018 4:14:03 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.22	0.50		mg/L	5	2/17/2018 1:17:03 AM	R49185
Chloride	120	5.0	10		mg/L	20	2/17/2018 1:29:27 AM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 1:17:03 AM	R49185
Bromide	1.2	0.073	0.50		mg/L	5	3/3/2018 2:55:33 AM	A49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/17/2018 1:17:03 AM	R49185
Phosphorus, Orthophosphate (As P)	3.3	1.2	2.5		mg/L	5	2/17/2018 1:17:03 AM	R49185
Sulfate	ND	0.48	2.5		mg/L	5	2/17/2018 1:17:03 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.7	0.0049	0.010		mg/L	5	2/21/2018 8:49:45 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:13:30 PM	B49271
Calcium	150	0.39	5.0		mg/L	5	2/21/2018 8:49:45 PM	A49287
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 8:47:51 PM	A49287
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:13:30 PM	B49271
Iron	9.6	0.16	0.20	*	mg/L	10	2/21/2018 8:51:34 PM	A49287
Magnesium	27	0.25	1.0		mg/L	1	2/20/2018 11:13:30 PM	B49271
Manganese	2.4	0.0020	0.010	*	mg/L	5	2/21/2018 8:49:45 PM	A49287
Potassium	0.77	0.11	1.0	J	mg/L	1	2/20/2018 11:13:30 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 11:13:30 PM	B49271
Sodium	290	0.82	5.0		mg/L	5	2/21/2018 8:49:45 PM	A49287
Zinc	0.0071	0.0021	0.010	J	mg/L	1	2/21/2018 8:47:51 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.7	0.0050	0.010		mg/L	5	3/1/2018 10:27:11 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:42:01 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:42:01 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:42:01 PM	36715
Iron	10	0.20	0.40	*	mg/L	20	3/1/2018 10:28:49 PM	36715
Manganese	2.3	0.0055	0.010	*	mg/L	5	3/1/2018 10:27:11 PM	36715
Silver	0.0018	0.0012	0.0050	J	mg/L	1	2/28/2018 7:42:01 PM	36715
Zinc	0.012	0.0033	0.010		mg/L	1	3/1/2018 10:25:32 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0096	0.0021	0.0050		mg/L	5	3/1/2018 8:40:59 PM	R49492
Lead	0.0020	0.00017	0.00050		mg/L	1	2/26/2018 11:13:29 PM	D49385
Selenium	ND	0.0076	0.010		mg/L	10	3/5/2018 9:51:25 PM	C49567

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.00049	0.000096	0.00050	J	mg/L	1	2/26/2018 11:13:29 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.010	0.00041	0.0010	*	mg/L	1	2/27/2018 4:01:38 PM	36715
Lead	0.0058	0.00023	0.00050		mg/L	1	2/27/2018 4:01:38 PM	36715
Selenium	0.0029	0.00098	0.0010		mg/L	1	3/7/2018 1:02:54 PM	36715
Uranium	0.0012	0.000068	0.00050		mg/L	1	2/27/2018 4:01:38 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/2/2018 11:41:58 AM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	4.9	3.6	10	J	µg/L	1	3/2/2018 9:17:35 AM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Aniline	ND	3.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzoic acid	ND	3.9	20		µg/L	1	3/2/2018 9:17:35 AM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 9:17:35 AM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4-Dimethylphenol	4.1	2.8	10	J	µg/L	1	3/2/2018 9:17:35 AM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Fluorene	6.5	4.0	10	J	µg/L	1	3/2/2018 9:17:35 AM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 9:17:35 AM	36609
1-Methylnaphthalene	120	3.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2-Methylnaphthalene	220	3.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 9:17:35 AM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Naphthalene	310	14	50	D	µg/L	5	3/8/2018 3:33:30 PM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 9:17:35 AM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 9:17:35 AM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 9:17:35 AM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Phenol	14	3.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 9:17:35 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 9:17:35 AM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 9:17:35 AM	36609
Surr: 2-Fluorophenol	39.8	0	15-114		%Rec	1	3/2/2018 9:17:35 AM	36609
Surr: Phenol-d5	38.7	0	15-97.9		%Rec	1	3/2/2018 9:17:35 AM	36609
Surr: 2,4,6-Tribromophenol	78.0	0	15-161		%Rec	1	3/2/2018 9:17:35 AM	36609
Surr: Nitrobenzene-d5	64.7	0	29.3-120		%Rec	1	3/2/2018 9:17:35 AM	36609
Surr: 2-Fluorobiphenyl	58.8	0	17.5-116		%Rec	1	3/2/2018 9:17:35 AM	36609
Surr: 4-Terphenyl-d14	40.8	0	21-92.2		%Rec	1	3/2/2018 9:17:35 AM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1900	1.2	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Toluene	3.7	1.3	20	J	µg/L	20	2/24/2018 12:59:28 PM	W49368
Ethylbenzene	740	1.9	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Methyl tert-butyl ether (MTBE)	10000	48	200		µg/L	200	2/24/2018 12:30:05 PM	W49368
1,2,4-Trimethylbenzene	670	2.3	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,3,5-Trimethylbenzene	85	1.7	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Naphthalene	570	2.3	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
1-Methylnaphthalene	210	3.2	80		µg/L	20	2/24/2018 12:59:28 PM	W49368
2-Methylnaphthalene	270	3.0	80		µg/L	20	2/24/2018 12:59:28 PM	W49368
Acetone	ND	16	200		µg/L	20	2/24/2018 12:59:28 PM	W49368
Bromobenzene	ND	2.8	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Bromodichloromethane	ND	3.5	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Bromoform	ND	4.2	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Bromomethane	ND	5.1	60		µg/L	20	2/24/2018 12:59:28 PM	W49368
2-Butanone	ND	23	200		µg/L	20	2/24/2018 12:59:28 PM	W49368
Carbon disulfide	ND	8.0	200		µg/L	20	2/24/2018 12:59:28 PM	W49368
Carbon Tetrachloride	ND	2.2	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Chlorobenzene	ND	2.1	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Chloroethane	ND	4.7	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
Chloroform	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Chloromethane	ND	5.9	60		µg/L	20	2/24/2018 12:59:28 PM	W49368
2-Chlorotoluene	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
4-Chlorotoluene	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
cis-1,2-DCE	ND	4.1	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
Dibromochloromethane	ND	1.4	20		µg/L	20	2/24/2018 12:59:28 PM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	1.8	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Dichlorodifluoromethane	ND	20	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1-Dichloroethane	ND	8.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1-Dichloroethene	ND	1.6	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2-Dichloropropane	ND	2.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,3-Dichloropropane	ND	3.3	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
2,2-Dichloropropane	ND	3.1	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1-Dichloropropene	ND	1.9	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Hexachlorobutadiene	ND	16	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
2-Hexanone	ND	13	200		µg/L	20	2/24/2018 12:59:28 PM	W49368
Isopropylbenzene	36	1.0	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
4-Isopropyltoluene	4.8	1.9	20	J	µg/L	20	2/24/2018 12:59:28 PM	W49368
4-Methyl-2-pentanone	ND	14	200		µg/L	20	2/24/2018 12:59:28 PM	W49368
Methylene Chloride	ND	2.2	60		µg/L	20	2/24/2018 12:59:28 PM	W49368
n-Butylbenzene	14	2.6	60	J	µg/L	20	2/24/2018 12:59:28 PM	W49368
n-Propylbenzene	97	1.5	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
sec-Butylbenzene	6.1	2.2	20	J	µg/L	20	2/24/2018 12:59:28 PM	W49368
Styrene	ND	3.1	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
tert-Butylbenzene	ND	2.1	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
trans-1,2-DCE	ND	3.7	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Trichlorofluoromethane	ND	3.7	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	2/24/2018 12:59:28 PM	W49368
Vinyl chloride	ND	3.6	20		µg/L	20	2/24/2018 12:59:28 PM	W49368
Xylenes, Total	640	6.4	30		µg/L	20	2/24/2018 12:59:28 PM	W49368
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	20	2/24/2018 12:59:28 PM	W49368
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	20	2/24/2018 12:59:28 PM	W49368
Surr: Dibromofluoromethane	104	0	70-130		%Rec	20	2/24/2018 12:59:28 PM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 8:10:00 AM
Lab ID: 1802951-009
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	100	0	70-130		%Rec	20	2/24/2018 12:59:28 PM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	16	0.19	1.0		mg/L	20	2/20/2018 10:45:56 PM	G49265
Surr: BFB	94.1	0	70-130		%Rec	20	2/20/2018 10:45:56 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/20/2018 4:41:57 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 4:41:57 PM	36596
Surr: DNOP	140	0	77.5-161		%Rec	1	2/20/2018 4:41:57 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.45	0.22	0.50	J	mg/L	5	2/17/2018 1:41:52 AM	R49185
Chloride	230	5.0	10		mg/L	20	2/17/2018 1:54:16 AM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 1:41:52 AM	R49185
Bromide	1.2	0.073	0.50		mg/L	5	3/3/2018 3:07:57 AM	A49521
Nitrogen, Nitrate (As N)	8.4	0.11	0.50		mg/L	5	2/17/2018 1:41:52 AM	R49185
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/17/2018 1:41:52 AM	R49185
Sulfate	230	1.9	10		mg/L	20	2/17/2018 1:54:16 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.049	0.00099	0.0020		mg/L	1	2/20/2018 11:15:19 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:15:19 PM	B49271
Calcium	51	0.078	1.0		mg/L	1	2/20/2018 11:15:19 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 8:53:25 PM	A49287
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:15:19 PM	B49271
Iron	ND	0.016	0.020		mg/L	1	2/20/2018 11:15:19 PM	B49271
Magnesium	13	0.25	1.0		mg/L	1	2/20/2018 11:15:19 PM	B49271
Manganese	0.0025	0.00039	0.0020		mg/L	1	2/20/2018 11:15:19 PM	B49271
Potassium	1.4	0.11	1.0		mg/L	1	2/20/2018 11:15:19 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 11:15:19 PM	B49271
Sodium	400	0.82	5.0		mg/L	5	2/21/2018 8:55:25 PM	A49287
Zinc	0.0083	0.0021	0.010	J	mg/L	1	2/21/2018 8:53:25 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.083	0.0010	0.0020		mg/L	1	2/28/2018 7:43:52 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:43:52 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:43:52 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:43:52 PM	36715
Iron	2.2	0.051	0.10	*	mg/L	5	3/1/2018 10:32:22 PM	36715
Manganese	0.045	0.0011	0.0020		mg/L	1	2/28/2018 7:43:52 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:43:52 PM	36715
Zinc	0.018	0.0033	0.010		mg/L	1	3/1/2018 10:30:44 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	3/1/2018 8:45:05 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 11:18:24 PM	D49385
Selenium	0.0067	0.0038	0.0050		mg/L	5	3/1/2018 8:45:05 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.035	0.00048	0.0025	*	mg/L	5	3/1/2018 8:45:05 PM	R49492
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0044	0.00041	0.0010		mg/L	1	2/27/2018 4:06:33 PM	36715
Lead	0.0023	0.00023	0.00050		mg/L	1	2/27/2018 4:06:33 PM	36715
Selenium	0.0053	0.00098	0.0010		mg/L	1	3/7/2018 1:07:49 PM	36715
Uranium	0.038	0.00034	0.0025	*	mg/L	5	2/28/2018 9:17:51 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00021	0.000037	0.00020		mg/L	1	3/2/2018 11:44:22 AM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Aniline	ND	3.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Benzoic acid	8.9	3.9	20	J	µg/L	1	3/2/2018 9:45:22 AM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 9:45:22 AM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 9:45:22 AM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 9:45:22 AM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 9:45:22 AM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 9:45:22 AM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 9:45:22 AM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Phenol	ND	3.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 9:45:22 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 9:45:22 AM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 9:45:22 AM	36609
Surr: 2-Fluorophenol	60.2	0	15-114		%Rec	1	3/2/2018 9:45:22 AM	36609
Surr: Phenol-d5	46.0	0	15-97.9		%Rec	1	3/2/2018 9:45:22 AM	36609
Surr: 2,4,6-Tribromophenol	90.6	0	15-161		%Rec	1	3/2/2018 9:45:22 AM	36609
Surr: Nitrobenzene-d5	93.0	0	29.3-120		%Rec	1	3/2/2018 9:45:22 AM	36609
Surr: 2-Fluorobiphenyl	80.7	0	17.5-116		%Rec	1	3/2/2018 9:45:22 AM	36609
Surr: 4-Terphenyl-d14	52.6	0	21-92.2		%Rec	1	3/2/2018 9:45:22 AM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Toluene	ND	0.064	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Methyl tert-butyl ether (MTBE)	0.66	0.24	1.0	J	µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Naphthalene	ND	0.11	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Acetone	0.89	0.82	10	J	µg/L	1	2/24/2018 10:04:13 AM	W49368
Bromobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Bromoform	ND	0.21	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Bromomethane	ND	0.26	3.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
2-Butanone	ND	1.1	10		µg/L	1	2/24/2018 10:04:13 AM	W49368
Carbon disulfide	ND	0.40	10		µg/L	1	2/24/2018 10:04:13 AM	W49368
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Chloroethane	ND	0.23	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Chloroform	ND	0.40	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Chloromethane	ND	0.29	3.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.091	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1-Dichloroethane	0.47	0.40	1.0	J	µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1-Dichloroethene	1.4	0.081	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
2-Hexanone	ND	0.66	10		µg/L	1	2/24/2018 10:04:13 AM	W49368
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/24/2018 10:04:13 AM	W49368
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Styrene	ND	0.16	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Tetrachloroethene (PCE)	0.16	0.13	1.0	J	µg/L	1	2/24/2018 10:04:13 AM	W49368
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Trichloroethene (TCE)	3.1	0.11	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/24/2018 10:04:13 AM	W49368
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/24/2018 10:04:13 AM	W49368
Surr: 1,2-Dichloroethane-d4	99.4	0	70-130		%Rec	1	2/24/2018 10:04:13 AM	W49368
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	2/24/2018 10:04:13 AM	W49368
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	2/24/2018 10:04:13 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 9:00:00 AM
Lab ID: 1802951-010 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	99.4	0	70-130		%Rec	1	2/24/2018 10:04:13 AM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.012	0.0097	0.050	J	mg/L	1	2/20/2018 11:08:58 PM	G49265
Surr: BFB	114	0	70-130		%Rec	1	2/20/2018 11:08:58 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.8	0.63	1.0		mg/L	1	2/20/2018 5:09:19 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 5:09:19 PM	36596
Surr: DNOP	110	0	77.5-161		%Rec	1	2/20/2018 5:09:19 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.61	0.22	0.50		mg/L	5	2/17/2018 2:06:40 AM	R49185
Chloride	220	5.0	10		mg/L	20	2/17/2018 2:19:04 AM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 2:06:40 AM	R49185
Bromide	1.2	0.073	0.50		mg/L	5	3/3/2018 3:45:10 AM	A49521
Nitrogen, Nitrate (As N)	ND	0.11	0.50		mg/L	5	2/17/2018 2:06:40 AM	R49185
Phosphorus, Orthophosphate (As P)	2.4	1.2	2.5	J	mg/L	5	2/17/2018 2:06:40 AM	R49185
Sulfate	ND	0.48	2.5		mg/L	5	2/17/2018 2:06:40 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.2	0.0049	0.010	*	mg/L	5	2/21/2018 8:59:21 PM	A49287
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:17:14 PM	B49271
Calcium	80	0.078	1.0		mg/L	1	2/20/2018 11:17:14 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 8:57:27 PM	A49287
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:17:14 PM	B49271
Iron	0.42	0.016	0.020	*	mg/L	1	2/20/2018 11:17:14 PM	B49271
Magnesium	23	0.25	1.0		mg/L	1	2/20/2018 11:17:14 PM	B49271
Manganese	2.2	0.0020	0.010	*	mg/L	5	2/21/2018 8:59:21 PM	A49287
Potassium	0.52	0.11	1.0	J	mg/L	1	2/20/2018 11:17:14 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 11:17:14 PM	B49271
Sodium	290	0.82	5.0		mg/L	5	2/21/2018 8:59:21 PM	A49287
Zinc	0.0083	0.0021	0.010	J	mg/L	1	2/21/2018 8:57:27 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	3/1/2018 10:43:07 PM	36715
Cadmium	ND	0.00058	0.0020		mg/L	1	2/28/2018 7:45:44 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:45:44 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:45:44 PM	36715
Iron	3.3	0.051	0.10	*	mg/L	5	3/1/2018 10:43:07 PM	36715
Manganese	2.1	0.0055	0.010	*	mg/L	5	3/1/2018 10:43:07 PM	36715
Silver	0.0013	0.0012	0.0050	J	mg/L	1	2/28/2018 7:45:44 PM	36715
Zinc	0.015	0.0033	0.010		mg/L	1	3/1/2018 10:34:05 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/1/2018 8:49:11 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 11:23:19 PM	D49385
Selenium	0.0046	0.0038	0.0050	J	mg/L	5	3/1/2018 8:49:11 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.00080	0.000096	0.00050		mg/L	1	2/26/2018 11:23:19 PM	D49385
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	2/28/2018 9:22:46 PM	36715
Lead	0.0028	0.00023	0.00050		mg/L	1	2/27/2018 4:11:28 PM	36715
Selenium	0.0030	0.00098	0.0010		mg/L	1	3/7/2018 1:12:44 PM	36715
Uranium	0.0010	0.000068	0.00050		mg/L	1	2/27/2018 4:11:28 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/2/2018 11:46:39 AM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	7.8	3.6	10	J	µg/L	1	3/2/2018 10:13:23 AM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Aniline	ND	3.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzoic acid	ND	3.9	20		µg/L	1	3/2/2018 10:13:23 AM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 10:13:23 AM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Fluorene	8.2	4.0	10	J	µg/L	1	3/2/2018 10:13:23 AM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 10:13:23 AM	36609
1-Methylnaphthalene	87	3.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Methylnaphthalene	25	3.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 10:13:23 AM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Naphthalene	20	2.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 10:13:23 AM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 10:13:23 AM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 10:13:23 AM	36609
Phenanthrene	5.0	4.3	10	J	µg/L	1	3/2/2018 10:13:23 AM	36609
Phenol	ND	3.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 10:13:23 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 10:13:23 AM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 10:13:23 AM	36609
Surr: 2-Fluorophenol	52.2	0	15-114		%Rec	1	3/2/2018 10:13:23 AM	36609
Surr: Phenol-d5	41.5	0	15-97.9		%Rec	1	3/2/2018 10:13:23 AM	36609
Surr: 2,4,6-Tribromophenol	78.4	0	15-161		%Rec	1	3/2/2018 10:13:23 AM	36609
Surr: Nitrobenzene-d5	79.6	0	29.3-120		%Rec	1	3/2/2018 10:13:23 AM	36609
Surr: 2-Fluorobiphenyl	72.7	0	17.5-116		%Rec	1	3/2/2018 10:13:23 AM	36609
Surr: 4-Terphenyl-d14	62.8	0	21-92.2		%Rec	1	3/2/2018 10:13:23 AM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	130	0.12	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Toluene	0.33	0.13	2.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
Ethylbenzene	21	0.19	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Methyl tert-butyl ether (MTBE)	160	0.48	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2,4-Trimethylbenzene	0.23	0.23	2.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
1,3,5-Trimethylbenzene	ND	0.17	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2-Dibromoethane (EDB)	ND	0.26	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Naphthalene	22	0.23	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1-Methylnaphthalene	85	0.32	8.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
2-Methylnaphthalene	23	0.30	8.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Acetone	1.8	1.6	20	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
Bromobenzene	ND	0.28	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Bromodichloromethane	ND	0.35	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Bromoform	ND	0.42	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Bromomethane	ND	0.51	6.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
2-Butanone	ND	2.3	20		µg/L	2	2/24/2018 11:02:21 AM	W49368
Carbon disulfide	ND	0.80	20		µg/L	2	2/24/2018 11:02:21 AM	W49368
Carbon Tetrachloride	ND	0.22	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Chlorobenzene	ND	0.21	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Chloroethane	ND	0.47	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Chloroform	ND	0.80	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Chloromethane	ND	0.59	6.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
cis-1,2-DCE	5.1	0.41	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
cis-1,3-Dichloropropene	ND	0.16	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2-Dibromo-3-chloropropane	ND	2.8	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Dibromochloromethane	ND	0.14	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.18	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2-Dichlorobenzene	ND	0.18	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,3-Dichlorobenzene	ND	0.30	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1-Dichloroethane	1.0	0.80	2.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1-Dichloroethene	0.72	0.16	2.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2-Dichloropropane	ND	0.20	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,3-Dichloropropane	ND	0.33	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
2,2-Dichloropropane	ND	0.31	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1-Dichloropropene	ND	0.19	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
2-Hexanone	ND	1.3	20		µg/L	2	2/24/2018 11:02:21 AM	W49368
Isopropylbenzene	3.8	0.10	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
4-Isopropyltoluene	0.23	0.19	2.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	2/24/2018 11:02:21 AM	W49368
Methylene Chloride	ND	0.22	6.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
n-Butylbenzene	1.8	0.26	6.0	J	µg/L	2	2/24/2018 11:02:21 AM	W49368
n-Propylbenzene	5.0	0.15	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
sec-Butylbenzene	2.1	0.22	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Styrene	ND	0.31	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
tert-Butylbenzene	ND	0.21	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1,1,2-Tetrachloroethane	ND	0.21	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1,2,2-Tetrachloroethane	ND	0.27	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Tetrachloroethene (PCE)	ND	0.26	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
trans-1,3-Dichloropropene	ND	0.44	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2,3-Trichlorobenzene	ND	0.23	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2,4-Trichlorobenzene	ND	0.28	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1,1-Trichloroethane	ND	0.15	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,1,2-Trichloroethane	ND	0.28	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Trichloroethene (TCE)	ND	0.22	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Trichlorofluoromethane	ND	0.37	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
1,2,3-Trichloropropane	ND	0.78	4.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Vinyl chloride	ND	0.36	2.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Xylenes, Total	ND	0.64	3.0		µg/L	2	2/24/2018 11:02:21 AM	W49368
Surr: 1,2-Dichloroethane-d4	94.2	0	70-130		%Rec	2	2/24/2018 11:02:21 AM	W49368
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	2	2/24/2018 11:02:21 AM	W49368
Surr: Dibromofluoromethane	99.4	0	70-130		%Rec	2	2/24/2018 11:02:21 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018 10:00:00 AM
Lab ID: 1802951-011 **Matrix:** AQUEOUS **Received Date:** 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	102	0	70-130		%Rec	2	2/24/2018 11:02:21 AM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.85	0.0097	0.050		mg/L	1	2/20/2018 11:31:58 PM	G49265
Surr: BFB	118	0	70-130		%Rec	1	2/20/2018 11:31:58 PM	G49265

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	2/20/2018 5:36:07 PM	36596
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	2/20/2018 5:36:07 PM	36596
Surr: DNOP	109	0	77.5-161		%Rec	1	2/20/2018 5:36:07 PM	36596
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.45	0.22	0.50	J	mg/L	5	2/17/2018 2:56:18 AM	R49185
Chloride	250	5.0	10		mg/L	20	2/17/2018 3:08:43 AM	R49185
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	2/17/2018 2:56:18 AM	R49185
Bromide	1.3	0.073	0.50		mg/L	5	3/3/2018 3:57:34 AM	A49521
Nitrogen, Nitrate (As N)	8.5	0.11	0.50		mg/L	5	2/17/2018 2:56:18 AM	R49185
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	2/17/2018 2:56:18 AM	R49185
Sulfate	230	1.9	10		mg/L	20	2/17/2018 3:08:43 AM	R49185
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.049	0.00099	0.0020		mg/L	1	2/20/2018 11:19:12 PM	B49271
Cadmium	ND	0.0010	0.0020		mg/L	1	2/20/2018 11:19:12 PM	B49271
Calcium	51	0.078	1.0		mg/L	1	2/20/2018 11:19:12 PM	B49271
Chromium	ND	0.0013	0.0060		mg/L	1	2/21/2018 9:01:21 PM	A49287
Copper	ND	0.0032	0.0060		mg/L	1	2/20/2018 11:19:12 PM	B49271
Iron	ND	0.016	0.020		mg/L	1	2/20/2018 11:19:12 PM	B49271
Magnesium	13	0.25	1.0		mg/L	1	2/20/2018 11:19:12 PM	B49271
Manganese	0.0020	0.00039	0.0020		mg/L	1	2/20/2018 11:19:12 PM	B49271
Potassium	1.4	0.11	1.0		mg/L	1	2/20/2018 11:19:12 PM	B49271
Silver	ND	0.0018	0.0050		mg/L	1	2/20/2018 11:19:12 PM	B49271
Sodium	390	0.82	5.0		mg/L	5	2/21/2018 9:03:23 PM	A49287
Zinc	0.0089	0.0021	0.010	J	mg/L	1	2/21/2018 9:01:21 PM	A49287
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.058	0.0010	0.0020		mg/L	1	2/28/2018 7:47:36 PM	36715
Cadmium	0.00072	0.00058	0.0020	J	mg/L	1	2/28/2018 7:47:36 PM	36715
Chromium	ND	0.0018	0.0060		mg/L	1	2/28/2018 7:47:36 PM	36715
Copper	ND	0.0041	0.0060		mg/L	1	2/28/2018 7:47:36 PM	36715
Iron	0.98	0.010	0.020	*	mg/L	1	3/1/2018 10:45:08 PM	36715
Manganese	0.020	0.0011	0.0020		mg/L	1	2/28/2018 7:47:36 PM	36715
Silver	ND	0.0012	0.0050		mg/L	1	2/28/2018 7:47:36 PM	36715
Zinc	0.0095	0.0033	0.010	J	mg/L	1	3/5/2018 1:58:34 PM	36715
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0025	0.0021	0.0050	J	mg/L	5	3/1/2018 7:31:05 PM	R49492
Lead	ND	0.00017	0.00050		mg/L	1	2/26/2018 11:28:13 PM	D49385
Selenium	0.0067	0.0038	0.0050		mg/L	5	3/1/2018 7:31:05 PM	R49492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.034	0.00048	0.0025	*	mg/L	5	3/1/2018 7:31:05 PM	R49492
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	2/28/2018 9:47:21 PM	36715
Lead	0.0011	0.00023	0.00050		mg/L	1	2/27/2018 4:36:05 PM	36715
Selenium	ND	0.0049	0.0050		mg/L	5	3/7/2018 1:27:28 PM	36715
Uranium	0.039	0.00034	0.0025	*	mg/L	5	2/28/2018 9:57:10 PM	36715
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00045	0.000037	0.00020		mg/L	1	3/2/2018 11:48:55 AM	36784
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Acenaphthylene	ND	3.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Aniline	ND	3.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Anthracene	ND	3.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Azobenzene	ND	4.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Benzoic acid	5.8	3.9	20	J	µg/L	1	3/2/2018 11:37:03 AM	36609
Benzyl alcohol	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Bis(2-ethylhexyl)phthalate	ND	4.8	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Carbazole	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Chloroaniline	ND	3.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Chlorophenol	ND	7.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Chrysene	ND	3.8	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Dibenzofuran	ND	4.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/2/2018 11:37:03 AM	36609
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Diethyl phthalate	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Fluoranthene	ND	4.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Fluorene	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Hexachloroethane	ND	1.2	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Isophorone	ND	4.4	10		µg/L	1	3/2/2018 11:37:03 AM	36609
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Methylphenol	ND	3.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/2/2018 11:37:03 AM	36609
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Naphthalene	ND	2.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Nitroaniline	ND	4.9	10		µg/L	1	3/2/2018 11:37:03 AM	36609
3-Nitroaniline	ND	4.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Nitroaniline	ND	4.0	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Nitrobenzene	ND	3.6	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2-Nitrophenol	ND	5.2	10		µg/L	1	3/2/2018 11:37:03 AM	36609
4-Nitrophenol	ND	5.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Pentachlorophenol	ND	4.9	20		µg/L	1	3/2/2018 11:37:03 AM	36609
Phenanthrene	ND	4.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Phenol	ND	3.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Pyrene	ND	4.4	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Pyridine	ND	2.3	10		µg/L	1	3/2/2018 11:37:03 AM	36609

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/2/2018 11:37:03 AM	36609
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/2/2018 11:37:03 AM	36609
Surr: 2-Fluorophenol	52.6	0	15-114		%Rec	1	3/2/2018 11:37:03 AM	36609
Surr: Phenol-d5	39.7	0	15-97.9		%Rec	1	3/2/2018 11:37:03 AM	36609
Surr: 2,4,6-Tribromophenol	83.1	0	15-161		%Rec	1	3/2/2018 11:37:03 AM	36609
Surr: Nitrobenzene-d5	76.6	0	29.3-120		%Rec	1	3/2/2018 11:37:03 AM	36609
Surr: 2-Fluorobiphenyl	66.6	0	17.5-116		%Rec	1	3/2/2018 11:37:03 AM	36609
Surr: 4-Terphenyl-d14	43.7	0	21-92.2		%Rec	1	3/2/2018 11:37:03 AM	36609
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Toluene	ND	0.064	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Ethylbenzene	ND	0.093	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Methyl tert-butyl ether (MTBE)	0.67	0.24	1.0	J	µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Naphthalene	ND	0.11	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Acetone	ND	0.82	10		µg/L	1	2/24/2018 10:33:14 AM	W49368
Bromobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Bromodichloromethane	ND	0.18	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Bromoform	ND	0.21	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Bromomethane	ND	0.26	3.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
2-Butanone	ND	1.1	10		µg/L	1	2/24/2018 10:33:14 AM	W49368
Carbon disulfide	ND	0.40	10		µg/L	1	2/24/2018 10:33:14 AM	W49368
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Chlorobenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Chloroethane	ND	0.23	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Chloroform	ND	0.40	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Chloromethane	ND	0.29	3.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Dibromochloromethane	ND	0.072	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.091	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1-Dichloroethane	0.48	0.40	1.0	J	µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1-Dichloroethene	1.7	0.081	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
2-Hexanone	ND	0.66	10		µg/L	1	2/24/2018 10:33:14 AM	W49368
Isopropylbenzene	ND	0.051	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	2/24/2018 10:33:14 AM	W49368
Methylene Chloride	ND	0.11	3.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
n-Butylbenzene	ND	0.13	3.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
n-Propylbenzene	ND	0.074	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Styrene	ND	0.16	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Tetrachloroethene (PCE)	0.17	0.13	1.0	J	µg/L	1	2/24/2018 10:33:14 AM	W49368
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Trichloroethene (TCE)	3.3	0.11	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Vinyl chloride	ND	0.18	1.0		µg/L	1	2/24/2018 10:33:14 AM	W49368
Xylenes, Total	ND	0.32	1.5		µg/L	1	2/24/2018 10:33:14 AM	W49368
Surr: 1,2-Dichloroethane-d4	97.4	0	70-130		%Rec	1	2/24/2018 10:33:14 AM	W49368
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	2/24/2018 10:33:14 AM	W49368
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	2/24/2018 10:33:14 AM	W49368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 1st QTR 2018 GW SAMPLING (MKTF)
Collection Date: 2/16/2018
Lab ID: 1802951-012
Matrix: AQUEOUS
Received Date: 2/16/2018 1:27:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	101	0	70-130		%Rec	1	2/24/2018 10:33:14 AM	W49368
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	2/21/2018 1:30:15 PM	W49276
Surr: BFB	114	0	70-130		%Rec	1	2/21/2018 1:30:15 PM	W49276

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589735** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	85.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	83.5	50	150			J
Calcium	0.49	1.0	0.5000	0	97.9	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.8	50	150			J
Copper	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.50	1.0	0.5000	0	99.2	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Potassium	0.51	1.0	0.5000	0	101	50	150			J
Silver	0.0050	0.0050	0.005000	0	101	50	150			

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589736** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	85	115			
Cadmium	0.53	0.0020	0.5000	0	107	85	115			
Calcium	48	1.0	50.00	0	97.0	85	115			
Chromium	0.52	0.0060	0.5000	0	104	85	115			
Copper	0.53	0.0060	0.5000	0	106	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	50	1.0	50.00	0	99.9	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49271**	RunNo: **49271**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589736** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	49	1.0	50.00	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49287**	RunNo: **49287**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591279** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49287**	RunNo: **49287**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.0	50	150			J
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0061	0.0060	0.006000	0	101	50	150			
Iron	0.019	0.020	0.02000	0	95.5	50	150			J
Magnesium	0.49	1.0	0.5000	0	97.7	50	150			J
Manganese	0.0016	0.0020	0.002000	0	80.0	50	150			J
Sodium	0.55	1.0	0.5000	0	109	50	150			J
Zinc	0.0054	0.010	0.005000	0	108	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49287**	RunNo: **49287**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	49	1.0	50.00	0	97.6	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A49287**			RunNo: **49287**					
Prep Date:		Analysis Date: **2/21/2018**			SeqNo: **1591281**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium		49	1.0	50.00	0	97.2	85	115			
Manganese		0.51	0.0020	0.5000	0	102	85	115			
Sodium		47	1.0	50.00	0	94.8	85	115			
Zinc		0.50	0.010	0.5000	0	101	85	115			

Sample ID	**LCS-B**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B49429**			RunNo: **49429**					
Prep Date:		Analysis Date: **2/27/2018**			SeqNo: **1596554**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.50	0.020	0.5000	0	99.4	85	115			

Sample ID	**MB-B**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B49429**			RunNo: **49429**					
Prep Date:		Analysis Date: **2/27/2018**			SeqNo: **1596568**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		ND	0.020								

Sample ID	**LLLCS-B**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B49429**			RunNo: **49429**					
Prep Date:		Analysis Date: **2/27/2018**			SeqNo: **1596569**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.021	0.020	0.02000	0	104	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802951-001GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49462**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1598274**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.45	0.0020	0.5000	0	90.3	70	130			
Chromium	0.45	0.0060	0.5000	0.02342	86.0	70	130			
Copper	0.57	0.0060	0.5000	0.07826	97.7	70	130			
Silver	0.11	0.0050	0.1000	0	106	70	130			

Sample ID	**1802951-001GMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49462**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1598275**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.45	0.0020	0.5000	0	90.6	70	130	0.380	20	
Chromium	0.46	0.0060	0.5000	0.02342	86.8	70	130	0.806	20	
Copper	0.57	0.0060	0.5000	0.07826	97.7	70	130	0.0371	20	
Silver	0.11	0.0050	0.1000	0	106	70	130	0.255	20	

Sample ID	**1802951-002GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-20**	Batch ID: **36715**			RunNo: **49462**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1598277**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.45	0.0020	0.5000	0	90.6	70	130			
Chromium	0.41	0.0060	0.5000	0	81.6	70	130			
Copper	0.55	0.0060	0.5000	0.02879	104	70	130			
Silver	0.13	0.0050	0.1000	0.01087	115	70	130			

Sample ID	**1802951-002GMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-20**	Batch ID: **36715**			RunNo: **49462**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1598278**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.45	0.0020	0.5000	0	89.2	70	130	1.61	20	
Chromium	0.40	0.0060	0.5000	0	80.0	70	130	2.03	20	
Copper	0.54	0.0060	0.5000	0.02879	102	70	130	1.94	20	
Silver	0.12	0.0050	0.1000	0.01087	112	70	130	1.68	20	

Sample ID	**1802951-001GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49490**					
Prep Date:	**2/26/2018**	Analysis Date: **3/1/2018**			SeqNo: **1599613**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802951-001GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49490**					
Prep Date:	**2/26/2018**	Analysis Date: **3/1/2018**			SeqNo: **1599613**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.3	0.010	0.5000	0.7228	107	70	130			
Zinc	0.73	0.050	0.5000	0.2460	95.9	70	130			

Sample ID	**1802951-001GMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49490**					
Prep Date:	**2/26/2018**	Analysis Date: **3/1/2018**			SeqNo: **1599614**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.3	0.010	0.5000	0.7228	107	70	130	7.60	20	
Zinc	0.77	0.050	0.5000	0.2460	105	70	130	17.2	20	

Sample ID	**1802951-002GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-20**	Batch ID: **36715**			RunNo: **49490**					
Prep Date:	**2/26/2018**	Analysis Date: **3/1/2018**			SeqNo: **1599617**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.43	0.010	0.5000	0.02448	81.9	70	130			

Sample ID	**1802951-002GMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-20**	Batch ID: **36715**			RunNo: **49490**					
Prep Date:	**2/26/2018**	Analysis Date: **3/1/2018**			SeqNo: **1599618**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.43	0.010	0.5000	0.02448	82.1	70	130	10.2	20	

Sample ID	**1802951-001GMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49540**					
Prep Date:	**2/26/2018**	Analysis Date: **3/5/2018**			SeqNo: **1601723**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.0	0.010	0.5000	1.586	82.2	70	130			

Sample ID	**1802951-001GMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**MKTF-16**	Batch ID: **36715**			RunNo: **49540**					
Prep Date:	**2/26/2018**	Analysis Date: **3/5/2018**			SeqNo: **1601724**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.0	0.010	0.5000	1.586	74.4	70	130	1.98	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D49385**	RunNo: **49385**
Prep Date:	Analysis Date: **2/26/2018**	SeqNo: **1595062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49492**	RunNo: **49492**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49492**	RunNo: **49492**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599239** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	108	50	150			
Lead	0.00045	0.00050	0.0005000	0	90.2	50	150			J
Selenium	0.0013	0.0010	0.001000	0	133	50	150			
Uranium	0.00046	0.00050	0.0005000	0	92.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**C49492**		RunNo:	**49492**				
Prep Date:		Analysis Date:	**3/1/2018**		SeqNo:	**1599240**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.8	85	115			
Lead	0.011	0.00050	0.01250	0	88.1	85	115			
Selenium	0.022	0.0010	0.02500	0	88.3	85	115			
Uranium	0.011	0.00050	0.01250	0	89.0	85	115			

Sample ID	**1802951-001FMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**MKTF-16**	Batch ID:	**R49492**		RunNo:	**49492**				
Prep Date:		Analysis Date:	**3/1/2018**		SeqNo:	**1599243**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.11	0.0050	0.1250	0.002662	88.4	70	130			
Lead	0.058	0.0025	0.06250	0	92.0	70	130			
Selenium	0.11	0.0050	0.1250	0	86.2	70	130			
Uranium	0.062	0.0025	0.06250	0.002032	95.5	70	130			

Sample ID	**1802951-001FMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**MKTF-16**	Batch ID:	**R49492**		RunNo:	**49492**				
Prep Date:		Analysis Date:	**3/1/2018**		SeqNo:	**1599244**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.11	0.0050	0.1250	0.002662	88.6	70	130	0.226	20	
Lead	0.058	0.0025	0.06250	0	93.1	70	130	1.16	20	
Selenium	0.11	0.0050	0.1250	0	87.8	70	130	1.80	20	
Uranium	0.063	0.0025	0.06250	0.002032	97.0	70	130	1.57	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**C49567**		RunNo:	**49567**				
Prep Date:		Analysis Date:	**3/5/2018**		SeqNo:	**1602551**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**C49567**		RunNo:	**49567**				
Prep Date:		Analysis Date:	**3/5/2018**		SeqNo:	**1602552**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00088	0.0010	0.001000	0	88.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MB-36715**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36715**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595145**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36715**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36715**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595146**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00047	0.00050	0.0005000	0	94.0	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID	**MSLCS-36715**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36715**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595147**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	85	115			
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.8	85	115			

Sample ID	**1802951-011GLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID:	**36715**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.016	0.00050	0.01250	0.002824	104	70	130			
Uranium	0.015	0.00050	0.01250	0.001012	109	70	130			

Sample ID	**1802951-011GLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID:	**36715**	RunNo:	**49403**					
Prep Date:	**2/26/2018**	Analysis Date:	**2/27/2018**	SeqNo:	**1595861**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.016	0.00050	0.01250	0.002824	103	70	130	1.15	20	
Uranium	0.015	0.00050	0.01250	0.001012	109	70	130	0.0612	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**1802951-012GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**DUP09**	Batch ID: **36715**			RunNo: **49403**					
Prep Date:	**2/26/2018**	Analysis Date: **2/27/2018**			SeqNo: **1595863**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0.001053	97.6	70	130			

Sample ID	**1802951-011GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID: **36715**			RunNo: **49463**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1597461**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.002262	90.0	70	130			

Sample ID	**1802951-011GLLMS**	SampType: **MSDLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID: **36715**			RunNo: **49463**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1597462**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.002262	90.5	70	130	0.507	20	

Sample ID	**1802951-012GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**DUP09**	Batch ID: **36715**			RunNo: **49463**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1597464**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0.002012	89.0	70	130			

Sample ID	**1802951-012GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**DUP09**	Batch ID: **36715**			RunNo: **49463**					
Prep Date:	**2/26/2018**	Analysis Date: **2/28/2018**			SeqNo: **1597466**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.050	0.0025	0.01250	0.03915	89.0	70	130			

Sample ID	**MB-36715**	SampType: **MBLK**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **36715**			RunNo: **49509**					
Prep Date:	**2/26/2018**	Analysis Date: **3/2/2018**			SeqNo: **1600624**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MSLLLCS-36715**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **36715**			RunNo: **49509**					
Prep Date:	**2/26/2018**	Analysis Date: **3/2/2018**			SeqNo: **1600625**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00088	0.0010	0.001000	0	88.0	50	150			J

Sample ID	**MSLCS-36715**	SampType: **LCS**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **36715**			RunNo: **49509**					
Prep Date:	**2/26/2018**	Analysis Date: **3/2/2018**			SeqNo: **1600626**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	98.0	85	115			

Sample ID	**1802951-011GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID: **36715**			RunNo: **49626**					
Prep Date:	**2/26/2018**	Analysis Date: **3/7/2018**			SeqNo: **1604207**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0.003030	80.2	70	130			

Sample ID	**1802951-011GLLMS**	SampType: **MSDLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-18**	Batch ID: **36715**			RunNo: **49626**					
Prep Date:	**2/26/2018**	Analysis Date: **3/7/2018**			SeqNo: **1604208**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0.003030	82.2	70	130	2.11	20	

Sample ID	**1802951-012GLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**DUP09**	Batch ID: **36715**			RunNo: **49626**					
Prep Date:	**2/26/2018**	Analysis Date: **3/7/2018**			SeqNo: **1604210**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0050	0.02500	0	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MB-36784**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36784**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600127**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-36784**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36784**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600128**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.4	80	120			

Sample ID	**1802951-001GMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**MKTF-16**	Batch ID:	**36784**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600130**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0.0004361	86.2	75	125			

Sample ID	**1802951-001GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**MKTF-16**	Batch ID:	**36784**	RunNo:	**49489**					
Prep Date:	**3/1/2018**	Analysis Date:	**3/1/2018**	SeqNo:	**1600131**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0.0004361	86.1	75	125	0.117	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49185**	RunNo: **49185**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587334** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49185**	RunNo: **49185**
Prep Date:	Analysis Date: **2/16/2018**	SeqNo: **1587335** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	91.2	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49521**	RunNo: **49521**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49521**	RunNo: **49521**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.5	90	110			
Bromide	2.3	0.10	2.500	0	93.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49521**	RunNo: **49521**
Prep Date:	Analysis Date: **3/3/2018**	SeqNo: **1600488** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A49521**	RunNo: **49521**
Prep Date:	Analysis Date: **3/3/2018**	SeqNo: **1600488** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	ND	0.10								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A49521**	RunNo: **49521**
Prep Date:	Analysis Date: **3/3/2018**	SeqNo: **1600489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.3	0.10	2.500	0	93.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID	**MB-36656**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**36656**	RunNo:	**49337**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/22/2018**	SeqNo:	**1592767**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-36656**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**36656**	RunNo:	**49337**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/22/2018**	SeqNo:	**1592768**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	105	70	130			

Sample ID	**1802951-004HMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-36**	Batch ID:	**36656**	RunNo:	**49337**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/22/2018**	SeqNo:	**1592780**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.065	0.0093	0.09333	0	69.2	26.5	132			

Sample ID	**1802951-004HMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-36**	Batch ID:	**36656**	RunNo:	**49337**					
Prep Date:	**2/22/2018**	Analysis Date:	**2/22/2018**	SeqNo:	**1592781**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.072	0.0094	0.09358	0	77.0	26.5	132	10.9	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **LCS-36596**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1588530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	92.3	135			
Surr: DNOP	0.52		0.5000		104	77.5	161			

Sample ID **MB-36596**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36596**	RunNo: **49234**
Prep Date: **2/19/2018**	Analysis Date: **2/20/2018**	SeqNo: **1588531** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		111	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.5	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49304**	RunNo: **49304**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1591076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49323**	RunNo: **49323**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1592715** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49323**	RunNo: **49323**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1592715** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R49323**	RunNo: **49323**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1592715** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R49323**	RunNo: **49323**
Prep Date:	Analysis Date: **2/22/2018**	SeqNo: **1592724** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.3	70	130			
Toluene	17	1.0	20.00	0	87.2	70	130			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	83.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID **1802951-004a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-36**	Batch ID: **R49323**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	10000	50	1000	8611	146	60.5	137			ES
Toluene	1000	50	1000	20.32	102	70	130			
Chlorobenzene	1000	50	1000	0	102	70	130			
1,1-Dichloroethene	1200	50	1000	0	117	70	130			
Trichloroethene (TCE)	990	50	1000	0	98.5	70	130			
Surr: 1,2-Dichloroethane-d4	480		500.0		96.5	70	130			
Surr: 4-Bromofluorobenzene	550		500.0		111	70	130			
Surr: Dibromofluoromethane	520		500.0		103	70	130			
Surr: Toluene-d8	490		500.0		98.4	70	130			

Sample ID **1802951-004a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-36**	Batch ID: **R49323**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593747** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	10000	50	1000	8611	169	60.5	137	2.25	20	ES

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **1802951-004a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-36**	Batch ID: **R49323**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593747** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	1000	50	1000	20.32	98.1	70	130	4.19	20	
Chlorobenzene	1000	50	1000	0	103	70	130	0.706	20	
1,1-Dichloroethene	1100	50	1000	0	115	70	130	1.81	20	
Trichloroethene (TCE)	970	50	1000	0	97.0	70	130	1.51	20	
Surr: 1,2-Dichloroethane-d4	510		500.0		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	560		500.0		111	70	130	0	0	
Surr: Dibromofluoromethane	520		500.0		105	70	130	0	0	
Surr: Toluene-d8	490		500.0		97.5	70	130	0	0	

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49368**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49368**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49368**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593761** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		98.5	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49368**	RunNo: **49368**
Prep Date:	Analysis Date: **2/23/2018**	SeqNo: **1593762** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **1802951-001dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-16**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599043** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	56.3	15	123			
4-Chloro-3-methylphenol	140	10	200.0	0	69.4	26.6	118			
2-Chlorophenol	120	10	200.0	0	61.0	15	120			
1,4-Dichlorobenzene	55	10	100.0	0	54.7	19	108			
2,4-Dinitrotoluene	65	10	100.0	0	64.5	27.8	103			
N-Nitrosodi-n-propylamine	73	10	100.0	0	72.8	32.3	126			
4-Nitrophenol	110	10	200.0	0	55.1	15	72.1			
Pentachlorophenol	120	20	200.0	0	61.7	15	114			
Phenol	91	10	200.0	62.08	14.7	15	67.5			S
Pyrene	65	10	100.0	0	64.9	31.2	112			
1,2,4-Trichlorobenzene	56	10	100.0	0	56.3	22.1	123			
Surr: 2-Fluorophenol	100		200.0		51.3	15	114			
Surr: Phenol-d5	79		200.0		39.4	15	97.9			
Surr: 2,4,6-Tribromophenol	140		200.0		71.4	15	161			
Surr: Nitrobenzene-d5	73		100.0		73.3	29.3	120			
Surr: 2-Fluorobiphenyl	55		100.0		54.8	17.5	116			
Surr: 4-Terphenyl-d14	37		100.0		37.0	21	92.2			

Sample ID **1802951-001dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-16**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599044** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	51	10	100.0	0	51.0	15	123	9.73	30.5	
4-Chloro-3-methylphenol	170	10	200.0	0	83.7	26.6	118	18.7	50	
2-Chlorophenol	130	10	200.0	0	67.5	15	120	10.0	36.3	
1,4-Dichlorobenzene	45	10	100.0	0	45.5	19	108	18.3	42.1	
2,4-Dinitrotoluene	63	10	100.0	0	63.0	27.8	103	2.42	28.5	
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.7	32.3	126	5.82	25.4	
4-Nitrophenol	110	10	200.0	0	56.5	15	72.1	2.47	50	
Pentachlorophenol	130	20	200.0	0	62.6	15	114	1.45	50	
Phenol	120	10	200.0	62.08	26.9	15	67.5	23.6	46.1	
Pyrene	59	10	100.0	0	59.1	31.2	112	9.39	34.3	
1,2,4-Trichlorobenzene	51	10	100.0	0	51.2	22.1	123	9.49	43.6	
Surr: 2-Fluorophenol	96		200.0		47.8	15	114	0	0	
Surr: Phenol-d5	74		200.0		36.8	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		70.4	15	161	0	0	
Surr: Nitrobenzene-d5	71		100.0		71.0	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	48		100.0		48.1	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **1802951-001dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-16**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599044** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	41		100.0		41.5	21	92.2	0	0	

Sample ID **lcs-36609**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599054** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	87	10	100.0	0	87.1	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	97.1	40.5	108			
2-Chlorophenol	160	10	200.0	0	79.4	35	103			
1,4-Dichlorobenzene	73	10	100.0	0	72.8	24.7	93.7			
2,4-Dinitrotoluene	89	10	100.0	0	88.8	35.6	91.4			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.0	41.6	114			
4-Nitrophenol	120	10	200.0	0	58.3	20.7	74.3			
Pentachlorophenol	120	20	200.0	0	59.6	25.3	98.5			
Phenol	130	10	200.0	0	66.7	20.9	75.1			
Pyrene	91	10	100.0	0	91.0	45.6	108			
1,2,4-Trichlorobenzene	83	10	100.0	0	83.3	30.3	106			
Surr: 2-Fluorophenol	120		200.0		62.2	15	114			
Surr: Phenol-d5	130		200.0		67.2	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		76.6	15	161			
Surr: Nitrobenzene-d5	93		100.0		92.7	29.3	120			
Surr: 2-Fluorobiphenyl	85		100.0		85.0	17.5	116			
Surr: 4-Terphenyl-d14	51		100.0		51.1	21	92.2			

Sample ID **mb-36609**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **mb-36609**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	11	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**
14-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **mb-36609**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36609**	RunNo: **49495**
Prep Date: **2/20/2018**	Analysis Date: **3/1/2018**	SeqNo: **1599056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	67		200.0		33.4	15	114			
Surr: Phenol-d5	59		200.0		29.3	15	97.9			
Surr: 2,4,6-Tribromophenol	110		200.0		54.4	15	161			
Surr: Nitrobenzene-d5	56		100.0		55.6	29.3	120			
Surr: 2-Fluorobiphenyl	48		100.0		48.0	17.5	116			
Surr: 4-Terphenyl-d14	35		100.0		34.9	21	92.2			

Sample ID **lcs-36704**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600776** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		68.1	15	114			
Surr: Phenol-d5	130		200.0		64.2	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		79.2	15	161			
Surr: Nitrobenzene-d5	81		100.0		81.3	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.3	17.5	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **lcs-36704**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600776** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	45		100.0		45.0	21	92.2			

Sample ID **mb-36704**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36704**	RunNo: **49525**
Prep Date: **2/26/2018**	Analysis Date: **3/2/2018**	SeqNo: **1600777** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	93		200.0		46.6	15	114			
Surr: Phenol-d5	73		200.0		36.5	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.9	15	161			
Surr: Nitrobenzene-d5	67		100.0		66.8	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	17.5	116			
Surr: 4-Terphenyl-d14	45		100.0		44.6	21	92.2			

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802951**

14-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW SAMPLING (MKTF)

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G49265**	RunNo: **49265**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.56	0.050	0.5000	0	112	70	130			
Surr: BFB	10		10.00		101	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G49265**	RunNo: **49265**
Prep Date:	Analysis Date: **2/20/2018**	SeqNo: **1589406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	12		10.00		118	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W49276**	RunNo: **49276**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1590915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.59	0.050	0.5000	0	117	70	130			
Surr: BFB	10		10.00		104	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W49276**	RunNo: **49276**
Prep Date:	Analysis Date: **2/21/2018**	SeqNo: **1590916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	12		10.00		117	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1802951 RcptNo: 1

Received By: Anne Thorne 2/16/2018 1:27:00 PM Anne Thorne

Completed By: Anne Thorne 2/16/2018 1:51:06 PM Anne Thorne

Reviewed By: JB / SRE 02/19/18 2/16/18 / reviewed by DDS

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 33 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? no
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON SAMPLE BOTTLES/at 2/16/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0		Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS			Air Bubbles (Y or N)
2/15/18	0915	WATER	MKTF-16	40 ML VOA-5	HCL	001			✓							✓						
				1 L AMBER-2	NEAT	001											✓						
				250 ML AMBER-1	NEAT	001			✓														
				250 ML PLASTIC-1	HNO_3	001												✓					
				125 ML PLASTIC-1	HNO_3	001												✓	✓				
				125 ML PLASTIC-1	H_2SO_4	001													✓				
				125 ML PLASTIC-1	NEAT	001													✓				
	1010	WATER	MKTF-20	40 ML VOA-5	HCL	002			✓							✓							
				1 L AMBER-1	NEAT	002											✓						
				250 ML AMBER-1	NEAT	002			✓														
				250 ML PLASTIC-1	HNO_3	002												✓					
				125 ML PLASTIC-1	HNO_3	002												✓	✓				

Date: 2/16/18 Time: 1327 Relinquished by:
Received by: Date Time 02/16/18 1327
Date: Time: Relinquished by:
Received by: Date Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
4 Coolers all @ 1.0 AT 02/16/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301

Phone #: 505-722-0281

email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)

Project #:

Project Manager: JESSICA O'BRIEN

Sampler: TRACY PAYNE

On ice: ☒ Yes ☐ No

Sample Temperature: 1.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1) 8011	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *		Air Bubbles (Y or N)
2/15/18	1010	WATER	MKTF-20	125 ML PLASTIC-1	H_2SO_4	002													✓		
				125 ML PLASTIC-1	NEAT	002													✓		
	1100	WATER	MKTF-21	40 ML VOA-5	HCL	003			✓							✓					
				1 L AMBER-1	NEAT	003											✓				
				250 ML AMBER-1	NEAT	003			✓												
				250 ML PLASTIC-1	HNO_3	003												✓			
				125 ML PLASTIC-1	HNO_3	003												✓	✓		
				125 ML PLASTIC-1	H_2SO_4	003													✓		
				125 ML PLASTIC-1	NEAT	003													✓		
	1610	WATER	MKTF-36	40 ML VOA-5	HCL	004			✓							✓					
				40 ML VOA-5	$Na_2S_2O_3$	004				✓											
				1 L AMBER-1	NEAT	004											✓				

Date: 2/16/18 Time: 1327 Relinquished by:

Received by: Date Time 02/16/18 1327

Date: Time: Relinquished by:

Received by: Date Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	* MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/15/18	1610	WATER	MKTF-36	250 ML AMBER-1	NEAT	704			✓													
				250 ML PLASTIC-1	HNO_3	704												✓				
				125 ML PLASTIC-1	HNO_3	704												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	704													✓			
				125 ML PLASTIC-1	NEAT	704													✓			
	1700	WATER	MKTF-35	40 ML VOA-5	HCL	705			✓							✓						
				40 ML VOA-3	$NA_2S_2O_3$	705					✓											
				1 L AMBER-1	NEAT	705	02/16/18										✓					
				250 ML AMBER-1	NEAT	705			✓													
				250 ML PLASTIC-1	HNO_3	705												✓				
				125 ML PLASTIC-1	HNO_3	705												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	705													✓			

Date: 2/14/18 Time: 1327 Relinquished by:
Received by: Date Time: 02/14/18 1327
Date: Time: Relinquished by:
Received by: Date Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD (MKTF)
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: .0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/5/18	1700	WATER	MKTF-35	125 ML PLASTIC-1	NEAT	-005													✓			
	-	WATER	DUP08	40 ML VOA-5	HCL	-006			✓							✓						
				1 L AMBER-1	NEAT	-006											✓					
				250 ML AMBER-1	NEAT	-006			✓													
				250 ML PLASTIC-1	HNO_3	-006												✓				
				125 ML PLASTIC-1	HNO_3	-006												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	-006													✓			
				125 ML PLASTIC-1	NEAT	-006													✓			
✓	✓	✓	TRIP BLANK	40 ML VOA-3	HCL	-007										✓						

Date	Time	Relinquished by	Received by	Date	Time
2/10/18	1327			2/10/18	1327
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: ANDEAVOR GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSIA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/16/18	0730	WATER	MKTF-17	40 ML VOA-5	HCL	-008				✓						✓						
				1 L AMBER-1	NEAT	-008											✓					
				250ML AMBER-1	NEAT	-008				✓												
				250 ML PLASTIC-1	HNO_3	-008												✓				
				125 ML PLASTIC-1	HNO_3	-008												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	-008													✓			
				125 ML PLASTIC-1	NEAT	-008													✓			

Date	Time	Relinquished by	Received by	Date	Time
2/16/18	1327			02/16/18	1327
Date	Time	Relinquished by	Received by	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/16/18	0810	WATER	MKTF-19	40 ML VOA-5	HCL	-009			✓							✓						
				1 L AMBER-1	NEAT	-009											✓					
				250 ML AMBER-1	NEAT	-009			✓													
				250 ML PLASTIC-1	HNO_3	-009												✓				
				125 ML PLASTIC-1	HNO_3	-009												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	-009													✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT	-009													✓			

Date	Time	Relinquished by	Received by	Date	Time
2/16/18	1327 ~~0810~~			02/16/18	1327
Date	Time	Relinquished by	Received by	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*			Air Bubbles (Y or N)
2/16/18	0900	WATER	MKTF-34	40 ML VOA-5	HCL	-010			✓							✓						
				1 L AMBER-2	NEAT	-010											✓					
				250 ML AMBER-1	NEAT	-010			✓													
				250 ML PLASTIC-1	HNO_3	-010												✓				
				125 ML PLASTIC-1	HNO_3	-010												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	-010													✓			
				125 ML PLASTIC-1	NEAT	-010													✓			

Date	Time	Relinquished by	Received by	Date	Time
2/16/18	1327				
Date:	Time:	Relinquished by:	Received by	Date	Time
				02/16/18	1526

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/16/18	1000	WATER	MKTF-1B	40 ML VOA-5	HCL	-011			✓							✓						
				1 L AMBER-1	NEAT	-011											✓					
				250 ML AMBER-1	NEAT	-011			✓													
				250 ML PLASTIC-1	HNO_3	-011												✓				
				125 ML PLASTIC-1	HNO_3	-011												✓	✓			
				125 ML PLASTIC-1	H_2SO_4	-011													✓			
				125 ML PLASTIC-1	NEAT	-011													✓			

Date	Time	Relinquished by:	Received by:	Date	Time
2/16/18	1327			02/16/18	1327
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1 QTR 2018 GW SAMPLING (MKTF)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802951	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS *			Air Bubbles (Y or N)
2/16/18	—	WATER	DUP09	40 ML VOA-5	HCL	012			✓							✓						
				1 L AMBER-1	NEAT	012											✓						
				250 ML AMBER-1	NEAT	012			✓														
				250 ML PLASTIC-1	HNO_3	012												✓					
				125 ML PLASTIC-1	HNO_3	012												✓	✓				
				125 ML PLASTIC-1	H_2SO_4	012													✓				
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT	012													✓				

Date	Time	Relinquished by	Received by	Date	Time
2/16/18	1327			2/16/18	1327
Date:	Time:	Relinquished by:	Received by:	Date:	Time:

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 23, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 1st QTR 2018 GW Sampling OW OrderNo.: 1803047

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 6 sample(s) on 3/1/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 10:50:00 AM
Lab ID: 1803047-001
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 7:45:20 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 2:13:25 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 2:13:25 PM	36805
Surr: DNOP	114	0	77.5-161		%Rec	1	3/5/2018 2:13:25 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/2/2018 10:53:41 AM	G49512
Surr: BFB	95.6	0	69.3-150		%Rec	1	3/2/2018 10:53:41 AM	G49512
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	3/12/2018 4:29:36 PM	R49736
Chloride	94	5.0	10		mg/L	20	3/12/2018 4:42:01 PM	R49736
Bromide	0.40	0.073	0.50	J	mg/L	5	3/12/2018 4:29:36 PM	R49736
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	3/12/2018 4:29:36 PM	R49736
Sulfate	170	0.48	2.5		mg/L	5	3/12/2018 4:29:36 PM	R49736
Nitrate+Nitrite as N	0.36	0.13	1.0	J	mg/L	5	3/12/2018 6:33:43 PM	R49736
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.033	0.00099	0.0020		mg/L	1	3/9/2018 4:35:52 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:35:52 PM	A49680
Calcium	2.1	0.078	1.0		mg/L	1	3/12/2018 10:06:17 PM	A49712
Chromium	0.0019	0.0013	0.0060	J	mg/L	1	3/9/2018 4:35:52 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:35:52 PM	A49680
Iron	0.022	0.016	0.020		mg/L	1	3/12/2018 10:06:17 PM	A49712
Magnesium	0.25	0.25	1.0	J	mg/L	1	3/9/2018 4:35:52 PM	A49680
Manganese	0.0030	0.00039	0.0020		mg/L	1	3/9/2018 4:35:52 PM	A49680
Potassium	0.79	0.11	1.0	J	mg/L	1	3/9/2018 4:35:52 PM	A49680
Silver	ND	0.0018	0.0050		mg/L	1	3/12/2018 10:06:17 PM	A49712
Sodium	340	0.82	5.0		mg/L	5	3/9/2018 5:43:32 PM	A49680
Zinc	0.0062	0.0021	0.010	J	mg/L	1	3/13/2018 6:11:52 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.038	0.0010	0.0020		mg/L	1	3/8/2018 12:40:56 PM	36876
Cadmium	0.00091	0.00058	0.0020	J	mg/L	1	3/8/2018 12:40:56 PM	36876
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	3/8/2018 12:40:56 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:40:56 PM	36876
Iron	0.11	0.010	0.020		mg/L	1	3/8/2018 12:40:56 PM	36876
Manganese	0.0077	0.0011	0.0020		mg/L	1	3/8/2018 12:40:56 PM	36876
Silver	ND	0.0012	0.0050		mg/L	1	3/8/2018 2:56:24 PM	36876
Zinc	0.0044	0.0033	0.010	J	mg/L	1	3/8/2018 12:40:56 PM	36876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 10:50:00 AM
Lab ID: 1803047-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/7/2018 9:42:44 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:25:07 PM	C49567
Selenium	ND	0.0038	0.0050		mg/L	5	3/7/2018 9:42:44 PM	C49633
Uranium	0.034	0.00048	0.0025	*	mg/L	5	3/7/2018 9:42:44 PM	C49633
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/13/2018 12:02:49 PM	36876
Lead	ND	0.00023	0.00050		mg/L	1	3/13/2018 11:52:50 AM	36876
Selenium	0.0025	0.00098	0.0010		mg/L	1	3/13/2018 11:52:50 AM	36876
Uranium	0.037	0.00034	0.0025	*	mg/L	5	3/9/2018 2:00:07 PM	36876
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000048	0.000037	0.00020	J	mg/L	1	3/7/2018 1:28:35 PM	36861
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Toluene	ND	0.064	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Methyl tert-butyl ether (MTBE)	1.1	0.24	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Naphthalene	ND	0.11	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Acetone	ND	0.82	10		µg/L	1	3/1/2018 7:29:05 PM	W49500
Bromobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Bromoform	ND	0.21	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Bromomethane	ND	0.26	3.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
2-Butanone	ND	1.1	10		µg/L	1	3/1/2018 7:29:05 PM	W49500
Carbon disulfide	ND	0.40	10		µg/L	1	3/1/2018 7:29:05 PM	W49500
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Chloroethane	ND	0.23	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Chloroform	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Chloromethane	ND	0.29	3.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 10:50:00 AM
Lab ID: 1803047-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Dibromomethane	ND	0.091	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
2-Hexanone	ND	0.66	10		µg/L	1	3/1/2018 7:29:05 PM	W49500
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/1/2018 7:29:05 PM	W49500
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Styrene	ND	0.16	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/1/2018 7:29:05 PM	W49500
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/1/2018 7:29:05 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 10:50:00 AM
Lab ID: 1803047-001
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	3/1/2018 7:29:05 PM	W49500
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	3/1/2018 7:29:05 PM	W49500
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	3/1/2018 7:29:05 PM	W49500
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	3/1/2018 7:29:05 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 12:45:00 PM
Lab ID: 1803047-002
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 8:15:18 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 2:40:55 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 2:40:55 PM	36805
Surr: DNOP	108	0	77.5-161		%Rec	1	3/5/2018 2:40:55 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.026	0.025	0.050	J	mg/L	1	3/2/2018 11:17:25 AM	G49512
Surr: BFB	101	0	69.3-150		%Rec	1	3/2/2018 11:17:25 AM	G49512
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	3/12/2018 4:54:26 PM	R49736
Chloride	390	12	25		mg/L	50	3/19/2018 6:03:28 PM	R49916
Bromide	1.1	0.073	0.50		mg/L	5	3/12/2018 4:54:26 PM	R49736
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	3/12/2018 4:54:26 PM	R49736
Sulfate	220	0.48	2.5		mg/L	5	3/12/2018 4:54:26 PM	R49736
Nitrate+Nitrite as N	1.2	0.13	1.0		mg/L	5	3/12/2018 6:46:07 PM	R49736
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.057	0.00099	0.0020		mg/L	1	3/9/2018 4:37:45 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:37:45 PM	A49680
Calcium	96	0.078	1.0		mg/L	1	3/12/2018 10:08:10 PM	A49712
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:37:45 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:37:45 PM	A49680
Iron	0.043	0.016	0.020		mg/L	1	3/12/2018 10:08:10 PM	A49712
Magnesium	18	0.25	1.0		mg/L	1	3/9/2018 4:37:45 PM	A49680
Manganese	0.12	0.00039	0.0020	*	mg/L	1	3/9/2018 4:37:45 PM	A49680
Potassium	1.6	0.11	1.0		mg/L	1	3/9/2018 4:37:45 PM	A49680
Silver	0.0032	0.0018	0.0050	J	mg/L	1	3/12/2018 10:08:10 PM	A49712
Sodium	770	1.6	10		mg/L	10	3/9/2018 5:45:37 PM	A49680
Zinc	0.0067	0.0021	0.010	J	mg/L	1	3/13/2018 6:13:38 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.047	0.0010	0.0020		mg/L	1	3/8/2018 12:42:50 PM	36876
Cadmium	ND	0.00058	0.0020		mg/L	1	3/8/2018 12:42:50 PM	36876
Chromium	ND	0.0018	0.0060		mg/L	1	3/8/2018 12:42:50 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:42:50 PM	36876
Iron	0.075	0.010	0.020		mg/L	1	3/8/2018 12:42:50 PM	36876
Manganese	0.015	0.0011	0.0020		mg/L	1	3/8/2018 12:42:50 PM	36876
Silver	0.0014	0.0012	0.0050	J	mg/L	1	3/8/2018 2:58:16 PM	36876
Zinc	ND	0.0033	0.010		mg/L	1	3/8/2018 12:42:50 PM	36876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 12:45:00 PM
Lab ID: 1803047-002
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	3/7/2018 9:57:14 PM	C49633
Lead	0.00020	0.00017	0.00050	J	mg/L	1	3/5/2018 10:29:56 PM	C49567
Selenium	0.010	0.0038	0.0050		mg/L	5	3/7/2018 9:57:14 PM	C49633
Uranium	0.054	0.00048	0.0025	*	mg/L	5	3/7/2018 9:57:14 PM	C49633
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0041	0.0021	0.0050	J	mg/L	5	3/13/2018 12:17:50 PM	36876
Lead	ND	0.00023	0.00050		mg/L	1	3/13/2018 12:12:50 PM	36876
Selenium	0.0096	0.00098	0.0010		mg/L	1	3/13/2018 12:12:50 PM	36876
Uranium	0.050	0.00034	0.0025	*	mg/L	5	3/9/2018 2:09:56 PM	36876
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000092	0.000037	0.00020	J	mg/L	1	3/7/2018 1:30:48 PM	36861
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Toluene	ND	0.064	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Methyl tert-butyl ether (MTBE)	27	0.24	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2-Dichloroethane (EDC)	0.60	0.40	1.0	J	µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Naphthalene	ND	0.11	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Acetone	ND	0.82	10		µg/L	1	3/1/2018 7:58:32 PM	W49500
Bromobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Bromoform	ND	0.21	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Bromomethane	ND	0.26	3.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
2-Butanone	ND	1.1	10		µg/L	1	3/1/2018 7:58:32 PM	W49500
Carbon disulfide	ND	0.40	10		µg/L	1	3/1/2018 7:58:32 PM	W49500
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Chloroethane	ND	0.23	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Chloroform	ND	0.40	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Chloromethane	ND	0.29	3.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
cis-1,2-DCE	0.34	0.20	1.0	J	µg/L	1	3/1/2018 7:58:32 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 12:45:00 PM
Lab ID: 1803047-002 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Dibromomethane	ND	0.091	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1-Dichloroethane	1.2	0.40	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1-Dichloroethene	0.90	0.081	1.0	J	µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
2-Hexanone	ND	0.66	10		µg/L	1	3/1/2018 7:58:32 PM	W49500
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/1/2018 7:58:32 PM	W49500
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Styrene	ND	0.16	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/1/2018 7:58:32 PM	W49500
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/1/2018 7:58:32 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 12:45:00 PM
Lab ID: 1803047-002
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	3/1/2018 7:58:32 PM	W49500
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	3/1/2018 7:58:32 PM	W49500
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	3/1/2018 7:58:32 PM	W49500
Surr: Toluene-d8	92.7	0	70-130		%Rec	1	3/1/2018 7:58:32 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 12
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018
Lab ID: 1803047-003
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 8:30:23 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 3:08:28 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 3:08:28 PM	36805
Surr: DNOP	107	0	77.5-161		%Rec	1	3/5/2018 3:08:28 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.025	0.050		mg/L	1	3/2/2018 11:41:12 AM	G49512
Surr: BFB	94.4	0	69.3-150		%Rec	1	3/2/2018 11:41:12 AM	G49512
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	3/12/2018 5:19:14 PM	R49736
Chloride	97	5.0	10		mg/L	20	3/12/2018 5:56:28 PM	R49736
Bromide	0.40	0.073	0.50	J	mg/L	5	3/12/2018 5:19:14 PM	R49736
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5	H	mg/L	5	3/12/2018 5:19:14 PM	R49736
Sulfate	170	0.48	2.5		mg/L	5	3/12/2018 5:19:14 PM	R49736
Nitrate+Nitrite as N	1.3	0.13	1.0		mg/L	5	3/12/2018 6:58:32 PM	R49736
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.033	0.00099	0.0020		mg/L	1	3/9/2018 4:39:52 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:39:52 PM	A49680
Calcium	2.1	0.078	1.0		mg/L	1	3/12/2018 10:10:19 PM	A49712
Chromium	0.0016	0.0013	0.0060	J	mg/L	1	3/9/2018 4:39:52 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:39:52 PM	A49680
Iron	ND	0.016	0.020		mg/L	1	3/12/2018 10:10:19 PM	A49712
Magnesium	ND	0.25	1.0		mg/L	1	3/9/2018 4:39:52 PM	A49680
Manganese	0.0025	0.00039	0.0020		mg/L	1	3/9/2018 4:39:52 PM	A49680
Potassium	0.73	0.11	1.0	J	mg/L	1	3/9/2018 4:39:52 PM	A49680
Silver	ND	0.0018	0.0050		mg/L	1	3/12/2018 10:10:19 PM	A49712
Sodium	320	0.82	5.0		mg/L	5	3/9/2018 5:47:47 PM	A49680
Zinc	0.013	0.0021	0.010		mg/L	1	3/13/2018 6:15:23 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.037	0.0010	0.0020		mg/L	1	3/8/2018 12:52:25 PM	36876
Cadmium	0.00089	0.00058	0.0020	J	mg/L	1	3/8/2018 12:52:25 PM	36876
Chromium	0.0021	0.0018	0.0060	J	mg/L	1	3/8/2018 12:52:25 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:52:25 PM	36876
Iron	0.12	0.010	0.020		mg/L	1	3/8/2018 12:52:25 PM	36876
Manganese	0.0075	0.0011	0.0020		mg/L	1	3/8/2018 12:52:25 PM	36876
Silver	ND	0.0012	0.0050		mg/L	1	3/8/2018 3:00:22 PM	36876
Zinc	0.0037	0.0033	0.010	J	mg/L	1	3/8/2018 12:52:25 PM	36876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 12
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018
Lab ID: 1803047-003
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/7/2018 10:02:03 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:44:27 PM	C49567
Selenium	ND	0.0038	0.0050		mg/L	5	3/7/2018 10:02:03 PM	C49633
Uranium	0.034	0.00048	0.0025	*	mg/L	5	3/7/2018 10:02:03 PM	C49633
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0021	0.0021	0.0050	J	mg/L	5	3/13/2018 12:27:51 PM	36876
Lead	ND	0.00023	0.00050		mg/L	1	3/13/2018 12:22:51 PM	36876
Selenium	0.0026	0.00098	0.0010		mg/L	1	3/13/2018 12:22:51 PM	36876
Uranium	0.036	0.00034	0.0025	*	mg/L	5	3/9/2018 2:14:52 PM	36876
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000057	0.000037	0.00020	J	mg/L	1	3/7/2018 1:33:01 PM	36861
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Toluene	ND	0.064	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Methyl tert-butyl ether (MTBE)	1.1	0.24	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Naphthalene	ND	0.11	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Acetone	ND	0.82	10		µg/L	1	3/1/2018 8:27:54 PM	W49500
Bromobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Bromoform	ND	0.21	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Bromomethane	ND	0.26	3.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
2-Butanone	ND	1.1	10		µg/L	1	3/1/2018 8:27:54 PM	W49500
Carbon disulfide	ND	0.40	10		µg/L	1	3/1/2018 8:27:54 PM	W49500
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Chloroethane	ND	0.23	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Chloroform	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Chloromethane	ND	0.29	3.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 12
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018
Lab ID: 1803047-003
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Dibromomethane	ND	0.091	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
2-Hexanone	ND	0.66	10		µg/L	1	3/1/2018 8:27:54 PM	W49500
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/1/2018 8:27:54 PM	W49500
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Styrene	ND	0.16	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/1/2018 8:27:54 PM	W49500
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/1/2018 8:27:54 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 12
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018
Lab ID: 1803047-003
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	3/1/2018 8:27:54 PM	W49500
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	3/1/2018 8:27:54 PM	W49500
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	3/1/2018 8:27:54 PM	W49500
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	3/1/2018 8:27:54 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 2:35:00 PM
Lab ID: 1803047-004
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	3/7/2018 8:45:32 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/5/2018 3:35:57 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 3:35:57 PM	36805
Surr: DNOP	108	0	77.5-161		%Rec	1	3/5/2018 3:35:57 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	3.5	0.12	0.25		mg/L	5	3/2/2018 12:04:52 PM	G49512
Surr: BFB	93.8	0	69.3-150		%Rec	5	3/2/2018 12:04:52 PM	G49512
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.067	0.00099	0.0020		mg/L	1	3/9/2018 4:41:45 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:41:45 PM	A49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:41:45 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:41:45 PM	A49680
Iron	0.25	0.016	0.020		mg/L	1	3/12/2018 10:12:11 PM	A49712
Manganese	0.31	0.00039	0.0020	*	mg/L	1	3/9/2018 4:41:45 PM	A49680
Silver	ND	0.0018	0.0050		mg/L	1	3/12/2018 10:12:11 PM	A49712
Zinc	0.0071	0.0021	0.010	J	mg/L	1	3/13/2018 6:17:08 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.074	0.0010	0.0020		mg/L	1	3/8/2018 12:54:19 PM	36876
Cadmium	ND	0.00058	0.0020		mg/L	1	3/8/2018 12:54:19 PM	36876
Chromium	ND	0.0018	0.0060		mg/L	1	3/8/2018 12:54:19 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:54:19 PM	36876
Iron	0.54	0.010	0.020	*	mg/L	1	3/8/2018 12:54:19 PM	36876
Manganese	0.35	0.0011	0.0020	*	mg/L	1	3/8/2018 12:54:19 PM	36876
Silver	0.0017	0.0012	0.0050	J	mg/L	1	3/8/2018 3:02:16 PM	36876
Zinc	ND	0.0033	0.010		mg/L	1	3/8/2018 12:54:19 PM	36876
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/7/2018 10:06:52 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:49:16 PM	C49567
Selenium	ND	0.0038	0.0050		mg/L	5	3/7/2018 10:06:52 PM	C49633
Uranium	0.048	0.00048	0.0025	*	mg/L	5	3/7/2018 10:06:52 PM	C49633
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0013	0.00041	0.0010		mg/L	1	3/13/2018 12:32:52 PM	36876
Lead	ND	0.00023	0.00050		mg/L	1	3/13/2018 12:32:52 PM	36876
Selenium	0.0021	0.00098	0.0010		mg/L	1	3/13/2018 12:32:52 PM	36876
Uranium	0.049	0.00034	0.0025	*	mg/L	5	3/9/2018 2:19:47 PM	36876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 2:35:00 PM
Lab ID: 1803047-004
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/7/2018 1:35:15 PM	36861
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.31	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Toluene	ND	0.32	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Ethylbenzene	ND	0.47	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Methyl tert-butyl ether (MTBE)	3700	12	50		µg/L	50	3/2/2018 2:17:43 AM	W49500
1,2,4-Trimethylbenzene	ND	0.56	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Naphthalene	ND	0.57	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
1-Methylnaphthalene	ND	0.80	20		µg/L	5	3/2/2018 2:46:41 AM	W49500
2-Methylnaphthalene	ND	0.76	20		µg/L	5	3/2/2018 2:46:41 AM	W49500
Acetone	ND	4.1	50		µg/L	5	3/2/2018 2:46:41 AM	W49500
Bromobenzene	ND	0.70	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Bromodichloromethane	ND	0.88	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Bromoform	ND	1.1	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Bromomethane	ND	1.3	15		µg/L	5	3/2/2018 2:46:41 AM	W49500
2-Butanone	ND	5.7	50		µg/L	5	3/2/2018 2:46:41 AM	W49500
Carbon disulfide	ND	2.0	50		µg/L	5	3/2/2018 2:46:41 AM	W49500
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Chlorobenzene	ND	0.53	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Chloroethane	ND	1.2	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
Chloroform	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Chloromethane	ND	1.5	15		µg/L	5	3/2/2018 2:46:41 AM	W49500
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
Dibromochloromethane	ND	0.36	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Dibromomethane	ND	0.45	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 2:35:00 PM
Lab ID: 1803047-004
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
2,2-Dichloropropane	ND	0.79	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
2-Hexanone	ND	3.3	50		µg/L	5	3/2/2018 2:46:41 AM	W49500
Isopropylbenzene	ND	0.26	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	3/2/2018 2:46:41 AM	W49500
Methylene Chloride	ND	0.54	15		µg/L	5	3/2/2018 2:46:41 AM	W49500
n-Butylbenzene	ND	0.65	15		µg/L	5	3/2/2018 2:46:41 AM	W49500
n-Propylbenzene	ND	0.37	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
sec-Butylbenzene	ND	0.55	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Styrene	ND	0.78	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	3/2/2018 2:46:41 AM	W49500
Vinyl chloride	ND	0.89	5.0		µg/L	5	3/2/2018 2:46:41 AM	W49500
Xylenes, Total	ND	1.6	7.5		µg/L	5	3/2/2018 2:46:41 AM	W49500
Surr: 1,2-Dichloroethane-d4	97.6	0	70-130		%Rec	5	3/2/2018 2:46:41 AM	W49500
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	5	3/2/2018 2:46:41 AM	W49500
Surr: Dibromofluoromethane	105	0	70-130		%Rec	5	3/2/2018 2:46:41 AM	W49500
Surr: Toluene-d8	98.9	0	70-130		%Rec	5	3/2/2018 2:46:41 AM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 4:20:00 PM
Lab ID: 1803047-005
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 9:00:37 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.0	0.63	1.0		mg/L	1	3/5/2018 4:03:31 PM	36805
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/5/2018 4:03:31 PM	36805
Surr: DNOP	107	0	77.5-161		%Rec	1	3/5/2018 4:03:31 PM	36805
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	32	1.2	2.5		mg/L	50	3/2/2018 1:39:11 PM	G49512
Surr: BFB	96.5	0	69.3-150		%Rec	50	3/2/2018 1:39:11 PM	G49512
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.1	0.0099	0.020	*	mg/L	10	3/9/2018 5:49:50 PM	A49680
Cadmium	ND	0.0010	0.0020		mg/L	1	3/9/2018 4:43:47 PM	A49680
Chromium	ND	0.0013	0.0060		mg/L	1	3/9/2018 4:43:47 PM	A49680
Copper	ND	0.0032	0.0060		mg/L	1	3/9/2018 4:43:47 PM	A49680
Iron	4.4	0.082	0.10	*	mg/L	5	3/12/2018 10:23:43 PM	A49712
Manganese	1.9	0.0039	0.020	*	mg/L	10	3/9/2018 5:49:50 PM	A49680
Silver	ND	0.0018	0.0050		mg/L	1	3/13/2018 6:18:53 PM	A49752
Zinc	0.0074	0.0021	0.010	J	mg/L	1	3/13/2018 6:18:53 PM	A49752
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.3	0.0050	0.010	*	mg/L	5	3/8/2018 2:05:05 PM	36876
Cadmium	ND	0.00058	0.0020		mg/L	1	3/8/2018 12:56:23 PM	36876
Chromium	ND	0.0018	0.0060		mg/L	1	3/8/2018 12:56:23 PM	36876
Copper	ND	0.0041	0.0060		mg/L	1	3/8/2018 12:56:23 PM	36876
Iron	4.8	0.051	0.10	*	mg/L	5	3/8/2018 2:05:05 PM	36876
Manganese	2.1	0.0055	0.010	*	mg/L	5	3/8/2018 2:05:05 PM	36876
Silver	ND	0.0012	0.0050		mg/L	1	3/8/2018 3:04:19 PM	36876
Zinc	ND	0.0033	0.010		mg/L	1	3/8/2018 12:56:23 PM	36876
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0064	0.0042	0.010	J	mg/L	10	3/7/2018 10:11:41 PM	C49633
Lead	ND	0.00017	0.00050		mg/L	1	3/5/2018 10:54:06 PM	C49567
Selenium	ND	0.0076	0.010		mg/L	10	3/7/2018 10:11:41 PM	C49633
Uranium	0.0034	0.000096	0.00050		mg/L	1	3/5/2018 10:54:06 PM	C49567
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0079	0.0041	0.010	J	mg/L	10	3/13/2018 12:52:54 PM	36876
Lead	ND	0.0011	0.0025		mg/L	5	3/9/2018 2:24:42 PM	36876
Selenium	ND	0.0098	0.010		mg/L	10	3/13/2018 12:52:54 PM	36876
Uranium	0.0031	0.00034	0.0025		mg/L	5	3/9/2018 2:24:42 PM	36876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 4:20:00 PM
Lab ID: 1803047-005
Matrix: AQUEOUS
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000077	0.000037	0.00020	J	mg/L	1	3/7/2018 1:37:29 PM	36861
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	14000	62	1000		µg/L	1000	3/2/2018 3:15:40 AM	W49500
Toluene	6.5	6.4	100	J	µg/L	100	3/2/2018 3:44:36 AM	W49500
Ethylbenzene	610	9.3	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Methyl tert-butyl ether (MTBE)	660	24	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2,4-Trimethylbenzene	ND	11	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,3,5-Trimethylbenzene	ND	8.7	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Naphthalene	44	11	200	J	µg/L	100	3/2/2018 3:44:36 AM	W49500
1-Methylnaphthalene	59	16	400	J	µg/L	100	3/2/2018 3:44:36 AM	W49500
2-Methylnaphthalene	ND	15	400		µg/L	100	3/2/2018 3:44:36 AM	W49500
Acetone	ND	82	1000		µg/L	100	3/2/2018 3:44:36 AM	W49500
Bromobenzene	ND	14	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Bromodichloromethane	ND	18	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Bromoform	ND	21	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Bromomethane	ND	26	300		µg/L	100	3/2/2018 3:44:36 AM	W49500
2-Butanone	ND	110	1000		µg/L	100	3/2/2018 3:44:36 AM	W49500
Carbon disulfide	ND	40	1000		µg/L	100	3/2/2018 3:44:36 AM	W49500
Carbon Tetrachloride	ND	11	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Chlorobenzene	ND	11	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Chloroethane	ND	23	200		µg/L	100	3/2/2018 3:44:36 AM	W49500
Chloroform	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Chloromethane	ND	29	300		µg/L	100	3/2/2018 3:44:36 AM	W49500
2-Chlorotoluene	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
4-Chlorotoluene	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
cis-1,2-DCE	ND	20	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	3/2/2018 3:44:36 AM	W49500
Dibromochloromethane	ND	7.2	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Dibromomethane	ND	9.1	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,3-Dichlorobenzene	ND	15	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,4-Dichlorobenzene	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Dichlorodifluoromethane	ND	100	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1-Dichloroethane	ND	40	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1-Dichloroethene	ND	8.1	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2-Dichloropropane	ND	10	100		µg/L	100	3/2/2018 3:44:36 AM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/27/2018 4:20:00 PM
Lab ID: 1803047-005 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	17	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
2,2-Dichloropropane	ND	16	200		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1-Dichloropropene	ND	9.3	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Hexachlorobutadiene	ND	80	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
2-Hexanone	ND	66	1000		µg/L	100	3/2/2018 3:44:36 AM	W49500
Isopropylbenzene	12	5.1	100	J	µg/L	100	3/2/2018 3:44:36 AM	W49500
4-Isopropyltoluene	ND	9.6	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	3/2/2018 3:44:36 AM	W49500
Methylene Chloride	ND	11	300		µg/L	100	3/2/2018 3:44:36 AM	W49500
n-Butylbenzene	ND	13	300		µg/L	100	3/2/2018 3:44:36 AM	W49500
n-Propylbenzene	32	7.4	100	J	µg/L	100	3/2/2018 3:44:36 AM	W49500
sec-Butylbenzene	ND	11	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Styrene	ND	16	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
tert-Butylbenzene	ND	10	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	3/2/2018 3:44:36 AM	W49500
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
trans-1,2-DCE	ND	18	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,1,2-Trichloroethane	ND	14	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Trichloroethene (TCE)	ND	11	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Trichlorofluoromethane	ND	18	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
1,2,3-Trichloropropane	ND	39	200		µg/L	100	3/2/2018 3:44:36 AM	W49500
Vinyl chloride	ND	18	100		µg/L	100	3/2/2018 3:44:36 AM	W49500
Xylenes, Total	ND	32	150		µg/L	100	3/2/2018 3:44:36 AM	W49500
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	100	3/2/2018 3:44:36 AM	W49500
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	100	3/2/2018 3:44:36 AM	W49500
Surr: Dibromofluoromethane	107	0	70-130		%Rec	100	3/2/2018 3:44:36 AM	W49500
Surr: Toluene-d8	96.5	0	70-130		%Rec	100	3/2/2018 3:44:36 AM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1803047-006
Matrix: TRIP BLANK
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	3/7/2018 9:15:44 PM	36883
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Toluene	ND	0.064	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Naphthalene	ND	0.11	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Acetone	2.2	0.82	10	J	µg/L	1	3/1/2018 6:59:38 PM	W49500
Bromobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Bromoform	ND	0.21	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Bromomethane	ND	0.26	3.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
2-Butanone	ND	1.1	10		µg/L	1	3/1/2018 6:59:38 PM	W49500
Carbon disulfide	ND	0.40	10		µg/L	1	3/1/2018 6:59:38 PM	W49500
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Chloroethane	ND	0.23	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Chloroform	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Chloromethane	ND	0.29	3.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Dibromomethane	ND	0.091	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1803047-006
Matrix: TRIP BLANK
Received Date: 3/1/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
2-Hexanone	ND	0.66	10		µg/L	1	3/1/2018 6:59:38 PM	W49500
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/1/2018 6:59:38 PM	W49500
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Styrene	ND	0.16	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/1/2018 6:59:38 PM	W49500
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/1/2018 6:59:38 PM	W49500
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	3/1/2018 6:59:38 PM	W49500
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	3/1/2018 6:59:38 PM	W49500
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	3/1/2018 6:59:38 PM	W49500
Surr: Toluene-d8	95.5	0	70-130		%Rec	1	3/1/2018 6:59:38 PM	W49500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607276** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0013	0.0020	0.002000	0	65.0	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0068	0.0060	0.006000	0	113	50	150			
Magnesium	0.47	1.0	0.5000	0	93.8	50	150			J
Manganese	0.0017	0.0020	0.002000	0	86.0	50	150			J
Potassium	0.49	1.0	0.5000	0	97.5	50	150			J
Sodium	0.49	1.0	0.5000	0	97.9	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.7	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Magnesium	48	1.0	50.00	0	95.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Potassium	47	1.0	50.00	0	94.0	85	115			
Sodium	47	1.0	50.00	0	94.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49680**	RunNo: **49680**
Prep Date:	Analysis Date: **3/9/2018**	SeqNo: **1607296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0015	0.0020	0.002000	0	76.0	50	150			J

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608453** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Silver	ND	0.0050								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Iron	0.021	0.020	0.02000	0	106	50	150			
Silver	0.0050	0.0050	0.005000	0	99.2	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49712**	RunNo: **49712**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49752**	RunNo: **49752**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**A49752**	RunNo:	**49752**
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0048	0.0050	0.005000	0	97.0	50	150			J
Zinc	0.0046	0.010	0.005000	0	92.6	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A49752**	RunNo:	**49752**
Prep Date:		Analysis Date:	**3/13/2018**	SeqNo:	**1610147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	99.6	85	115			
Zinc	0.46	0.010	0.5000	0	92.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-36876**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605342** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.0012	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-36876**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	118	50	150			
Cadmium	0.0027	0.0020	0.002000	0	134	50	150			
Chromium	0.0072	0.0060	0.006000	0	120	50	150			
Copper	0.0045	0.0060	0.006000	0	75.5	50	150			J
Iron	0.022	0.020	0.02000	0	111	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Zinc	0.0044	0.010	0.005000	0	88.6	50	150			J

Sample ID **LCS-36876**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **36876**	RunNo: **49640**
Prep Date: **3/6/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.8	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			
Zinc	0.47	0.010	0.5000	0	93.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00047	0.00050	0.0005000	0	93.9	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C49567**	RunNo: **49567**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	98.0	85	115			
Uranium	0.012	0.00050	0.01250	0	99.9	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C49633**	RunNo: **49633**
Prep Date:	Analysis Date: **3/7/2018**	SeqNo: **1604512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	91.6	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.6	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**LCS**	SampType: **LCS**		TestCode: **EPA 200.8: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **C49633**		RunNo: **49633**						
Prep Date:		Analysis Date: **3/7/2018**		SeqNo: **1604513**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.024	0.0010	0.02500	0	94.9	85	115			
Selenium		0.023	0.0010	0.02500	0	90.8	85	115			
Uranium		0.012	0.00050	0.01250	0	94.2	85	115			

Sample ID	**1082C47-001EMSD**	SampType: **MSD**		TestCode: **EPA 200.8: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **C49633**		RunNo: **49633**						
Prep Date:		Analysis Date: **3/7/2018**		SeqNo: **1604517**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.11	0.0050	0.1250	0.004450	86.8	70	130	3.89	20	
Selenium		0.11	0.0050	0.1250	0.004673	81.7	70	130	2.95	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36876**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605617**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36876**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605618**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00069	0.0010	0.001000	0	68.7	50	150			J
Lead	0.00046	0.00050	0.0005000	0	92.0	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID	**MSLCS-36876**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36876**	RunNo:	**49651**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/8/2018**	SeqNo:	**1605619**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.4	85	115			
Lead	0.012	0.00050	0.01250	0	93.8	85	115			
Uranium	0.012	0.00050	0.01250	0	94.7	85	115			

Sample ID	**1803047-001FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**OW-1**	Batch ID:	**36876**	RunNo:	**49686**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606851**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.048	0.0025	0.01250	0.03678	90.5	70	130			

Sample ID	**MB-36876**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36876**	RunNo:	**49759**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609689**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MSLLLCS-36876**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **36876**			RunNo: **49759**					
Prep Date:	**3/6/2018**	Analysis Date: **3/13/2018**			SeqNo: **1609690**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00079	0.0010	0.001000	0	78.9	50	150			J

Sample ID	**MSLCS-36876**	SampType: **LCS**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **36876**			RunNo: **49759**					
Prep Date:	**3/6/2018**	Analysis Date: **3/13/2018**			SeqNo: **1609691**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	88.8	85	115			
Uranium	0.011	0.00050	0.01250	0	89.1	85	115			

Sample ID	**1803047-001FLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**OW-1**	Batch ID: **36876**			RunNo: **49759**					
Prep Date:	**3/6/2018**	Analysis Date: **3/13/2018**			SeqNo: **1609694**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	92.7	70	130			
Selenium	0.024	0.0010	0.02500	0.002482	85.5	70	130			

Sample ID	**1803047-001FLLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**OW-1**	Batch ID: **36876**			RunNo: **49759**					
Prep Date:	**3/6/2018**	Analysis Date: **3/13/2018**			SeqNo: **1609696**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0050	0.02500	0	98.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36861**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36861**	RunNo:	**49616**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1603960**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000054	0.00020								J

Sample ID	**LCS-36861**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36861**	RunNo:	**49616**					
Prep Date:	**3/6/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1603961**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0054	0.00020	0.005000	0	108	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49736**	RunNo: **49736**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49736**	RunNo: **49736**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	93.0	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.2	0.50	10.00	0	92.5	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.6	90	110			

Sample ID **1803047-003DMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **DUP 12**	Batch ID: **R49736**	RunNo: **49736**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608832** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.6	0.50	2.500	0	103	55.8	133			
Bromide	13	0.50	12.50	0.4009	99.2	78.7	107			
Sulfate	220	2.5	50.00	170.3	95.6	84.3	120			

Sample ID **1803047-003DMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **DUP 12**	Batch ID: **R49736**	RunNo: **49736**
Prep Date:	Analysis Date: **3/12/2018**	SeqNo: **1608833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.6	0.50	2.500	0	102	55.8	133	0.366	20	
Bromide	13	0.50	12.50	0.4009	98.6	78.7	107	0.578	20	
Sulfate	220	2.5	50.00	170.3	90.4	84.3	120	1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBW**	Batch ID:	**R49916**	RunNo:	**49916**					
Prep Date:		Analysis Date:	**3/19/2018**	SeqNo:	**1615688**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID	**LCS**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSW**	Batch ID:	**R49916**	RunNo:	**49916**					
Prep Date:		Analysis Date:	**3/19/2018**	SeqNo:	**1615689**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36883**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**36883**	RunNo:	**49644**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1605053**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-36883**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**36883**	RunNo:	**49644**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1605054**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**LCS-36805**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**36805**		RunNo:	**49531**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/5/2018**		SeqNo:	**1600947**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		5.0	1.0	5.000	0	99.6	70	130			
Surr: DNOP		0.49		0.5000		98.8	77.5	161			

Sample ID	**MB-36805**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**36805**		RunNo:	**49531**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/5/2018**		SeqNo:	**1600948**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	1.0								
Motor Oil Range Organics (MRO)		ND	5.0								
Surr: DNOP		1.1		1.000		111	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G49512**	RunNo: **49512**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600712** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.3	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G49512**	RunNo: **49512**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600713** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.57	0.050	0.5000	0	114	75.8	123			
Surr: BFB	23		20.00		115	69.3	150			

Sample ID **1803047-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-29**	Batch ID: **G49512**	RunNo: **49512**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	6.2	0.25	2.500	3.500	107	52.5	149			
Surr: BFB	110		100.0		114	69.3	150			

Sample ID **1803047-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-29**	Batch ID: **G49512**	RunNo: **49512**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	6.2	0.25	2.500	3.500	107	52.5	149	0	20	
Surr: BFB	110		100.0		115	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49500**	RunNo: **49500**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599151** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	0.53	4.0								J
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49500**	RunNo: **49500**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599151** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.29	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49500**	RunNo: **49500**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599152** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	96.0	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803047**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49500**	RunNo: **49500**
Prep Date:	Analysis Date: **3/1/2018**	SeqNo: **1599152** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1803047 | RcptNo: 1

Received By: Mandy Woods 3/1/2018 10:00:00 AM

Completed By: Ashley Gallegos 3/1/2018 12:51:14 PM

Reviewed By: 3/1/18 labeled by! RDS

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 13 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? (NO)
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: RDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: Custody Seals present and intact on sample bottles 3/1/18 RDS

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On ice: ☒ Yes ☐ No
Sample Temperature: 0.5°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803047	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 5011 Soil)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS / ANIONS *			Air Bubbles (Y or N)
2/27/18	1050	WATER	OW-1	40 ML VOA-5	HCL	-001			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓												
				250 ML AMBER-1	NEAT				✓														
				250 ML PLASTIC-1	HNO_3													✓					
				125 ML PLASTIC-1	HNO_3													✓	✓				
				125 ML PLASTIC-1	H_2SO_4														✓				
				125 ML PLASTIC-1	NEAT														✓				
	1245	WATER	OW-10	40 ML VOA-5	HCL	-002			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓												
				250 ML AMBER-1	NEAT				✓														
				250 ML PLASTIC-1	HNO_3													✓					
				125 ML PLASTIC-1	HNO_3													✓	✓				

Date: 2/28/18 Time: 0700 Relinquished by:
Received by: (Courier) 3/1/18 Date 3/1/18 Time 1000
Date: Time: Relinquished by:
Received by: Date Time

Remarks:
* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☐ Yes ☐ No
Sample Temperature: 0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803047	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1) 8011	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED) *	MAJOR CATIONS / ANIONS			Air Bubbles (Y or N)
2/27/18	1175	WATER	ON-10	125 ML PLASTIC-1	H_2SO_4	-002													✓			
	↓	↓	↓	125 ML PLASTIC-1	NEAT	1													✓			
	—	WATER	DUP12	40 ML VOA-5	HCL	-003			✓							✓						
				40 ML VOA-3	$Na_2S_2O_3$						✓											
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓	✓			
				125 ML PLASTIC-1	H_2SO_4														✓			
↓	↓	↓	↓	125 ML PLASTIC-1	NEAT	1													✓			

Date: 2/28/18 Time: 0700 Relinquished by:
Date: Time: Relinquished by:

Received by: COURIER 3/1/18 Date: 3/1/18 Time: 1000
Received by: Date: Time:

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.3°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803047	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1, 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)				Air Bubbles (Y or N)
2/27/18	1435	WATER	OW-29	40 ML VOA-5	HCL	004			✓							✓						
				40 ML VOA-3	$NA_2S_2O_3$						✓												
				250 ML AMBER-1	NEAT				✓														
				250ML PLASTIC-1	HNO_3													✓					
				125 ML PLASTIC-1	HNO_3													✓					
	1620	WATER	OW-14	40 ML VOA-5	HCL	-005			✓							✓						
				40 ML VOA-3	$NA_2S_2O_3$						✓												
				250 ML AMBER-1	NEAT				✓														
				250 ML PLASTIC-1	HNO_3													✓					
				125 ML PLASTIC-1	HNO_3													✓					
↓	-	WATER	TRIP BLANK	40 ML VOA-3	HCL	-006										✓						

Date: 2/28/18 Time: 0700 Relinquished by:
Received by: Date: 3/1/18 Time: 1000
Date: Time: Relinquished by:
Received by: Date: Time:

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 20, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 1st QTR 2018 Pond Sampling OrderNo.: 1803065

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/1/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803065**
Date Reported: **3/20/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 8:48:00 AM
Lab ID: 1803065-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	26	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	<10	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 9:05:00 AM
Lab ID: 1803065-002 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	150	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	109	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 9:15:00 AM
Lab ID: 1803065-003
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	>171.30	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	109	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 10:05:00 AM
Lab ID: 1803065-004
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	160	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	402	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 10:15:00 AM
Lab ID: 1803065-005 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	260	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	2987	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 10:25:00 AM
Lab ID: 1803065-006
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	450	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	>24196	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 10:45:00 AM
Lab ID: 1803065-007 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	29	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	<10	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 10:55:00 AM
Lab ID: 1803065-008
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	27	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	<10	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 11:05:00 AM
Lab ID: 1803065-009
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	44	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	<10	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 11:20:00 AM
Lab ID: 1803065-010 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	86	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	<10	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 1st QTR 2018 Pond Sampling
Collection Date: 3/1/2018 11:30:00 AM
Lab ID: 1803065-011
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	280	2.0	2.0		mg/L	1	3/6/2018 3:56:00 PM	36796
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **dbf**	
E. Coli	12997	10.00	10.00		MPN/100	10	3/2/2018 4:26:00 PM	36794

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1510		100	10	03/05/2018 10:35	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	591		50.0	5	03/05/2018 22:47	WG1080413

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	849		20.0	2	03/05/2018 10:37	WG1028041

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	106		20.0	2	03/05/2018 10:37	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	611		100	10	03/05/2018 10:38	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	787		100	10	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	4040		100	10	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	3530		200	20	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	3290		200	20	03/05/2018 10:40	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	504		100	10	03/05/2018 10:40	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	678		100	10	03/05/2018 10:40	WG1080411

Method Blank (MB)

(MB) R3290505-1 03/05/18 10:29

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L974187-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974187-02 03/05/18 10:32 • (DUP) R3290505-6 03/05/18 10:32

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	28.1	28.5	1	1.56		20

L974487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974487-01 03/05/18 10:40 • (DUP) R3290505-7 03/05/18 10:41

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	26.7	23.0	1	14.6		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3290505-2 03/05/18 10:30 • (LCSD) R3290505-3 03/05/18 10:30

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	246	246	102	102	90.0-110			0.224	20

L974114-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974114-01 03/05/18 10:31 • (MS) R3290505-4 03/05/18 10:31 • (MSD) R3290505-5 03/05/18 10:31

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	64.7	477	471	103	102	1	80.0-120			1.28	20

Method Blank (MB)

(MB) R3290686-1 03/05/18 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L974353-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974353-01 03/05/18 22:45 • (DUP) R3290686-4 03/05/18 22:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	99.8	105	1	4.79		20

L974802-06 Original Sample (OS) • Duplicate (DUP)

(OS) L974802-06 03/05/18 22:52 • (DUP) R3290686-7 03/05/18 22:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	ND	9.70	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3290686-2 03/05/18 22:45 • (LCSD) R3290686-3 03/05/18 22:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	241	239	99.7	98.9	90.0-110			0.737	20

L974631-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974631-10 03/05/18 22:48 • (MS) R3290686-5 03/05/18 22:48 • (MSD) R3290686-6 03/05/18 22:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	U	395	398	98.7	99.4	1	80.0-120			0.765	20

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803065**

20-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID **MB-36796**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **36796**	RunNo: **49612**							
Prep Date: **3/1/2018**	Analysis Date: **3/6/2018**	SeqNo: **1603868**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--36796**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **36796**	RunNo: **49612**							
Prep Date: **3/1/2018**	Analysis Date: **3/6/2018**	SeqNo: **1603869**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-36796**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **36796**	RunNo: **49612**							
Prep Date: **3/1/2018**	Analysis Date: **3/6/2018**	SeqNo: **1603870**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	170	2.0	198.0	0	86.4	84.6	115.4			

Sample ID **1803065-001BDUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **EP-9**	Batch ID: **36796**	RunNo: **49612**							
Prep Date: **3/1/2018**	Analysis Date: **3/6/2018**	SeqNo: **1603872**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	25	2.0						3.92	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803065**

20-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 Pond Sampling

Sample ID	**MB-36794**	SampType:	**MBLK**	TestCode:	**SM 9223B Fecal Indicator: E. coli MPN**
Client ID:	**PBW**	Batch ID:	**36794**	RunNo:	**49577**
Prep Date:	**3/1/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1602676** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1803065 | RcptNo: 1

Received By: Anne Thorne 3/1/2018 2:50:00 PM

Completed By: Anne Thorne 3/1/2018 3:11:01 PM

Reviewed By: DDS 3/1/18 @ 1530

Labled By: ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 11 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: ENM

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

CUSTODY SEALS INTACT ON SAMPLE BOTTLES/at/3/1/18

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type): EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING POND 3
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803015	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
3/1/18	0848	WATER	EP-9	1 L PLASTIC-1	NEAT	001												✓				
				500 ML PLASTIC-1	H_2SO_4	001													✓			
				100 ML PLASTIC-1	NEAT	001														✓		
	0905	WATER	EP-6	1 L PLASTIC-1	NEAT	002												✓				
				500 ML PLASTIC-1	H_2SO_4	002													✓			
				100 ML PLASTIC-1	NEAT	002														✓		
	0915	WATER	EP-5	1 L PLASTIC-1	NEAT	003												✓				
				500 ML PLASTIC-1	H_2SO_4	003													✓			
				100 ML PLASTIC-1	NEAT	003														✓		
	1005	WATER	EP-4	1 L PLASTIC-1	NEAT	004												✓				
				500 ML PLASTIC-1	H_2SO_4	004													✓			
				100 ML PLASTIC-1	NEAT	004														✓		

Date: 3/1/18 Time: 1450 Relinquished by:
Received by: Date Time 03/01/18 1450
Date: Time: Relinquished by:
Received by: Date Time

Remarks:
All 4 coolers 1.0 AT 03/01/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: ANDEAVOR GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD^POND GW SAMPLING
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type): EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0°

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803665
3/1/18	1015	WATER	EP-3	1 L PLASTIC-1	NEAT	-005
				500 ML PLASTIC-1	H_2SO_4	-005
				100 ML PLASTIC-1	NEAT	-005
	1025	WATER	EP-2	1 L PLASTIC-1	NEAT	-006
				500 ML PLASTIC-1	H_2SO_4	-006
				100 ML PLASTIC-1	NEAT	-006
	1045	WATER	EP-8	1 L PLASTIC-1	NEAT	-007
				500 ML PLASTIC-1	H_2SO_4	-007
				100 ML PLASTIC-1	NEAT	-007
	1055	WATER	EP-7	1 L PLASTIC-1	NEAT	-008
				500 ML PLASTIC-1	H_2SO_4	-008
				100 ML PLASTIC-1	NEAT	-008

Analysis Request

	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
1												✓				
2													✓			
3														✓		
4												✓				
5													✓			
6														✓		
7												✓				
8													✓			
9														✓		
10												✓				
11													✓			
12														✓		

Date	Time	Relinquished by:	Received by:	Date	Time
3/1/18	1450			03/01/18	1450
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package
☐ Standard ☒ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING & POND
Project #:
Project Manager: JESSICA OBRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803065	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
3/1/18	1105	WATER	EP-11	1L PLASTIC-1	NEAT	209												✓				
				500ML PLASTIC-1	H_2SO_4	209													✓			
				100ML PLASTIC-1	NEAT	209														✓		
	1120	WATER	EP-12	1L PLASTIC-1	NEAT	210 (3/10/18)												✓				
				500ML PLASTIC-1	H_2SO_4	210													✓			
				100ML PLASTIC-1	NEAT	210														✓		
	1130	WATER	EP-12B	1L PLASTIC-1	NEAT	211												✓				
				500ML PLASTIC-1	H_2SO_4	211													✓			
↓	↓	↓	↓	100ML PLASTIC-1	NEAT	211														✓		

Date: 3/1/18 Time: 1450 Relinquished by:
Received by: Date Time 03/01/18 1450
Date: Time: Relinquished by:
Received by: Date Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1510		100	10	03/05/2018 10:35	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	591		50.0	5	03/05/2018 22:47	WG1080413

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	849		20.0	2	03/05/2018 10:37	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	106		20.0	2	03/05/2018 10:37	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	611		100	10	03/05/2018 10:38	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	787		100	10	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	4040		100	10	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	3530		200	20	03/05/2018 10:39	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	3290		200	20	03/05/2018 10:40	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	504		100	10	03/05/2018 10:40	WG1080411

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	678		100	10	03/05/2018 10:40	WG1080411

Method Blank (MB)

(MB) R3290505-1 03/05/18 10:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L974187-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974187-02 03/05/18 10:32 • (DUP) R3290505-6 03/05/18 10:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	28.1	28.5	1	1.56		20

L974487-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974487-01 03/05/18 10:40 • (DUP) R3290505-7 03/05/18 10:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	26.7	23.0	1	14.6		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3290505-2 03/05/18 10:30 • (LCSD) R3290505-3 03/05/18 10:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	246	246	102	102	90.0-110			0.224	20

L974114-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974114-01 03/05/18 10:31 • (MS) R3290505-4 03/05/18 10:31 • (MSD) R3290505-5 03/05/18 10:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	64.7	477	471	103	102	1	80.0-120			1.28	20

Method Blank (MB)

(MB) R3290686-1 03/05/18 22:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L974353-01 Original Sample (OS) • Duplicate (DUP)

(OS) L974353-01 03/05/18 22:45 • (DUP) R3290686-4 03/05/18 22:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	99.8	105	1	4.79		20

L974802-06 Original Sample (OS) • Duplicate (DUP)

(OS) L974802-06 03/05/18 22:52 • (DUP) R3290686-7 03/05/18 22:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	ND	9.70	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3290686-2 03/05/18 22:45 • (LCSD) R3290686-3 03/05/18 22:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	241	239	99.7	98.9	90.0-110			0.737	20

L974631-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974631-10 03/05/18 22:48 • (MS) R3290686-5 03/05/18 22:48 • (MSD) R3290686-6 03/05/18 22:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	U	395	398	98.7	99.4	1	80.0-120			0.765	20

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 23, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 1st QTR 2018 GW Sampling (PW-4) OrderNo.: 1803072

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/1/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1803072**
Date Reported: **3/23/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date: 3/1/2018 9:40:00 AM
Lab ID: 1803072-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **CJS**	
Fluoride	ND	0.22	0.50		mg/L	5	3/2/2018 8:44:02 PM	R49514
Chloride	7.5	1.2	2.5		mg/L	5	3/2/2018 8:44:02 PM	R49514
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	3/2/2018 8:44:02 PM	R49514
Bromide	ND	0.073	0.50		mg/L	5	3/2/2018 8:44:02 PM	R49514
Nitrogen, Nitrate (As N)	0.17	0.11	0.50	J	mg/L	5	3/2/2018 8:44:02 PM	R49514
Phosphorus, Orthophosphate (As P)	ND	1.2	2.5		mg/L	5	3/2/2018 8:44:02 PM	R49514
Sulfate	400	1.9	10		mg/L	20	3/2/2018 8:56:26 PM	R49514
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.012	0.00099	0.0020		mg/L	1	3/19/2018 9:25:24 PM	D49900
Cadmium	ND	0.0010	0.0020		mg/L	1	3/19/2018 9:25:24 PM	D49900
Calcium	180	0.39	5.0		mg/L	5	3/20/2018 5:20:30 PM	A49941
Chromium	ND	0.0013	0.0060		mg/L	1	3/19/2018 9:25:24 PM	D49900
Copper	ND	0.0032	0.0060		mg/L	1	3/19/2018 9:25:24 PM	D49900
Iron	0.33	0.016	0.020	*	mg/L	1	3/20/2018 7:20:58 PM	A49941
Magnesium	40	0.25	1.0		mg/L	1	3/19/2018 9:25:24 PM	D49900
Manganese	0.0094	0.00039	0.0020		mg/L	1	3/19/2018 9:25:24 PM	D49900
Potassium	1.3	0.11	1.0		mg/L	1	3/19/2018 9:25:24 PM	D49900
Silver	0.0040	0.0018	0.0050	J	mg/L	1	3/19/2018 9:25:24 PM	D49900
Sodium	18	0.16	1.0		mg/L	1	3/19/2018 9:25:24 PM	D49900
Zinc	0.0067	0.0021	0.010	J	mg/L	1	3/19/2018 9:25:24 PM	D49900
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.013	0.0010	0.0020		mg/L	1	3/14/2018 8:23:55 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/14/2018 8:23:55 PM	36893
Chromium	ND	0.0018	0.0060		mg/L	1	3/15/2018 6:27:38 PM	36893
Copper	ND	0.0041	0.0060		mg/L	1	3/14/2018 8:23:55 PM	36893
Iron	0.47	0.010	0.020	*	mg/L	1	3/14/2018 8:23:55 PM	36893
Manganese	0.010	0.0011	0.0020		mg/L	1	3/14/2018 8:23:55 PM	36893
Silver	0.0048	0.0012	0.0050	J	mg/L	1	3/14/2018 8:23:55 PM	36893
Zinc	ND	0.0033	0.010		mg/L	1	3/15/2018 6:27:38 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0027	0.0021	0.0050	J	mg/L	5	3/14/2018 1:21:55 PM	B49783
Lead	ND	0.00017	0.00050		mg/L	1	3/13/2018 5:55:37 PM	B49749
Selenium	ND	0.0038	0.0050		mg/L	5	3/14/2018 1:21:55 PM	B49783
Uranium	0.0013	0.00048	0.0025	J	mg/L	5	3/14/2018 1:21:55 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0026	0.00041	0.0010		mg/L	1	3/14/2018 12:18:32 PM	36893
Lead	ND	0.00023	0.00050		mg/L	1	3/14/2018 12:18:32 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date: 3/1/2018 9:40:00 AM
Lab ID: 1803072-001
Matrix: AQUEOUS
Received Date: 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Selenium	0.0012	0.00098	0.0010		mg/L	1	3/14/2018 12:18:32 PM	36893
Uranium	0.0015	0.000068	0.00050		mg/L	1	3/14/2018 12:18:32 PM	36893
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000048	0.000037	0.00020	J	mg/L	1	3/12/2018 4:06:52 PM	36955
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	3.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Acenaphthylene	ND	3.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Aniline	ND	3.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Anthracene	ND	3.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Azobenzene	ND	4.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benz(a)anthracene	ND	3.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzo(a)pyrene	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzo(b)fluoranthene	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzo(g,h,i)perylene	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzo(k)fluoranthene	ND	4.4	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzoic acid	ND	3.9	20		µg/L	1	3/8/2018 9:34:17 PM	36823
Benzyl alcohol	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Bis(2-chloroethoxy)methane	ND	4.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Bis(2-chloroethyl)ether	ND	4.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Bis(2-chloroisopropyl)ether	ND	3.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Bis(2-ethylhexyl)phthalate	6.2	4.8	10	J	µg/L	1	3/8/2018 9:34:17 PM	36823
4-Bromophenyl phenyl ether	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Butyl benzyl phthalate	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Carbazole	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4-Chloro-3-methylphenol	ND	6.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4-Chloroaniline	ND	3.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Chloronaphthalene	ND	3.7	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Chlorophenol	ND	7.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4-Chlorophenyl phenyl ether	ND	3.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Chrysene	ND	3.8	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Di-n-butyl phthalate	ND	5.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Di-n-octyl phthalate	ND	4.7	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Dibenz(a,h)anthracene	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Dibenzofuran	ND	4.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
1,2-Dichlorobenzene	ND	2.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
1,3-Dichlorobenzene	ND	1.8	10		µg/L	1	3/8/2018 9:34:17 PM	36823
1,4-Dichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
3,3´-Dichlorobenzidine	ND	3.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date: 3/1/2018 9:40:00 AM
Lab ID: 1803072-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Dimethyl phthalate	ND	3.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4-Dichlorophenol	ND	5.7	20		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4-Dimethylphenol	ND	2.8	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4,6-Dinitro-2-methylphenol	ND	3.9	20		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4-Dinitrophenol	ND	2.6	20		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4-Dinitrotoluene	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2,6-Dinitrotoluene	ND	4.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Fluoranthene	ND	4.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Fluorene	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Hexachlorobenzene	ND	3.8	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Hexachlorobutadiene	ND	1.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Hexachlorocyclopentadiene	ND	1.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Hexachloroethane	ND	1.2	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Indeno(1,2,3-cd)pyrene	ND	4.2	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Isophorone	ND	4.4	10		µg/L	1	3/8/2018 9:34:17 PM	36823
1-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Methylnaphthalene	ND	3.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Methylphenol	ND	3.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
3+4-Methylphenol	ND	3.2	10		µg/L	1	3/8/2018 9:34:17 PM	36823
N-Nitrosodi-n-propylamine	ND	4.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
N-Nitrosodimethylamine	ND	3.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
N-Nitrosodiphenylamine	ND	3.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Naphthalene	ND	2.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Nitroaniline	ND	4.9	10		µg/L	1	3/8/2018 9:34:17 PM	36823
3-Nitroaniline	ND	4.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4-Nitroaniline	ND	4.0	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Nitrobenzene	ND	3.6	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2-Nitrophenol	ND	5.2	10		µg/L	1	3/8/2018 9:34:17 PM	36823
4-Nitrophenol	ND	5.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Pentachlorophenol	ND	4.9	20		µg/L	1	3/8/2018 9:34:17 PM	36823
Phenanthrene	ND	4.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Phenol	ND	3.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Pyrene	ND	4.4	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Pyridine	ND	2.3	10		µg/L	1	3/8/2018 9:34:17 PM	36823
1,2,4-Trichlorobenzene	ND	2.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4,5-Trichlorophenol	ND	5.1	10		µg/L	1	3/8/2018 9:34:17 PM	36823
2,4,6-Trichlorophenol	ND	5.5	10		µg/L	1	3/8/2018 9:34:17 PM	36823
Surr: 2-Fluorophenol	52.9	0	15-114		%Rec	1	3/8/2018 9:34:17 PM	36823

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date: 3/1/2018 9:40:00 AM
Lab ID: 1803072-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	42.8	0	15-97.9		%Rec	1	3/8/2018 9:34:17 PM	36823
Surr: 2,4,6-Tribromophenol	85.1	0	15-161		%Rec	1	3/8/2018 9:34:17 PM	36823
Surr: Nitrobenzene-d5	74.8	0	29.3-120		%Rec	1	3/8/2018 9:34:17 PM	36823
Surr: 2-Fluorobiphenyl	74.6	0	17.5-116		%Rec	1	3/8/2018 9:34:17 PM	36823
Surr: 4-Terphenyl-d14	49.0	0	21-92.2		%Rec	1	3/8/2018 9:34:17 PM	36823
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Toluene	ND	0.064	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Naphthalene	ND	0.11	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Acetone	ND	0.82	10		µg/L	1	3/2/2018 6:10:31 PM	W49527
Bromobenzene	ND	0.14	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Bromoform	ND	0.21	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Bromomethane	ND	0.26	3.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
2-Butanone	ND	1.1	10		µg/L	1	3/2/2018 6:10:31 PM	W49527
Carbon disulfide	ND	0.40	10		µg/L	1	3/2/2018 6:10:31 PM	W49527
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Chloroethane	ND	0.23	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Chloroform	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Chloromethane	ND	0.29	3.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Dibromomethane	ND	0.091	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date: 3/1/2018 9:40:00 AM
Lab ID: 1803072-001 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
2-Hexanone	ND	0.66	10		µg/L	1	3/2/2018 6:10:31 PM	W49527
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/2/2018 6:10:31 PM	W49527
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Styrene	ND	0.16	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/2/2018 6:10:31 PM	W49527
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/2/2018 6:10:31 PM	W49527
Surr: 1,2-Dichloroethane-d4	96.4	0	70-130		%Rec	1	3/2/2018 6:10:31 PM	W49527
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	3/2/2018 6:10:31 PM	W49527
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	3/2/2018 6:10:31 PM	W49527
Surr: Toluene-d8	94.5	0	70-130		%Rec	1	3/2/2018 6:10:31 PM	W49527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date:
Lab ID: 1803072-002 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Toluene	ND	0.064	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Naphthalene	ND	0.11	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Acetone	ND	0.82	10		µg/L	1	3/2/2018 5:41:26 PM	W49527
Bromobenzene	ND	0.14	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Bromoform	ND	0.21	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Bromomethane	ND	0.26	3.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
2-Butanone	ND	1.1	10		µg/L	1	3/2/2018 5:41:26 PM	W49527
Carbon disulfide	ND	0.40	10		µg/L	1	3/2/2018 5:41:26 PM	W49527
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Chloroethane	ND	0.23	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Chloroform	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Chloromethane	ND	0.29	3.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Dibromomethane	ND	0.091	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 1st QTR 2018 GW Sampling (PW-4)
Collection Date:
Lab ID: 1803072-002 **Matrix:** AQUEOUS **Received Date:** 3/1/2018 2:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
2-Hexanone	ND	0.66	10		µg/L	1	3/2/2018 5:41:26 PM	W49527
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/2/2018 5:41:26 PM	W49527
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Styrene	ND	0.16	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/2/2018 5:41:26 PM	W49527
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/2/2018 5:41:26 PM	W49527
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	3/2/2018 5:41:26 PM	W49527
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	3/2/2018 5:41:26 PM	W49527
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	3/2/2018 5:41:26 PM	W49527
Surr: Toluene-d8	92.4	0	70-130		%Rec	1	3/2/2018 5:41:26 PM	W49527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 4500CN E-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	03/07/2018 12:14	WG1081006

Method Blank (MB)

(MB) R3291197-1 03/07/18 12:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	0.00235	J	0.00180	0.00500

L974914-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974914-02 03/07/18 12:32 • (DUP) R3291197-7 03/07/18 12:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.00722	0.000	1	200	R1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3291197-2 03/07/18 12:02 • (LCSD) R3291197-3 03/07/18 12:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.112	0.112	112	112	85.0-115			0.000	20

L974545-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974545-01 03/07/18 12:14 • (MS) R3291197-4 03/07/18 12:15 • (MSD) R3291197-5 03/07/18 12:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.101	0.0882	99.1	86.3	1	75.0-125			13.5	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	95.5	50	150			J
Chromium	0.0070	0.0060	0.006000	0	118	50	150			
Copper	0.0046	0.0060	0.006000	0	76.2	50	150			J
Magnesium	0.50	1.0	0.5000	0	100	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Potassium	0.48	1.0	0.5000	0	96.0	50	150			J
Silver	0.0056	0.0050	0.005000	0	112	50	150			
Sodium	0.65	1.0	0.5000	0	131	50	150			J
Zinc	0.0046	0.010	0.005000	0	91.0	50	150			J

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0029	0.0020	0.002000	0	144	50	150			

Sample ID **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**LCS-D**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**D49900**	RunNo:	**49900**
Prep Date:		Analysis Date:	**3/19/2018**	SeqNo:	**1616063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.51	0.0060	0.5000	0	103	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Magnesium	48	1.0	50.00	0	96.5	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Potassium	47	1.0	50.00	0	94.9	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			
Sodium	47	1.0	50.00	0	94.0	85	115			
Zinc	0.49	0.010	0.5000	0	98.1	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.50	1.0	0.5000	0	99.9	50	150			J
Iron	0.019	0.020	0.02000	0	94.6	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A49941**	RunNo:	**49941**
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	47	1.0	50.00	0	94.6	85	115			
Iron	0.49	0.020	0.5000	0	97.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611541** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	0.0054	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Copper	0.0052	0.0060	0.006000	0	86.0	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49799**
Prep Date:	**3/7/2018**	Analysis Date:	**3/14/2018**	SeqNo:	**1611543** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49832**
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Zinc	0.0034	0.010								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612959**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0059	0.0060	0.006000	0	98.5	50	150			J
Zinc	0.0056	0.010	0.005000	0	111	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612960**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610029** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	96.2	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.1	85	115			
Uranium	0.011	0.00050	0.01250	0	90.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606839**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606840**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0014	0.0010	0.001000	0	140	50	150			
Lead	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.6	50	150			J

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609686**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609687**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00077	0.0010	0.001000	0	77.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609688**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	86.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID	**MB-36955**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607730**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000040	0.00020								J

Sample ID	**LCS-36955**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**36955**	RunNo:	**49708**					
Prep Date:	**3/12/2018**	Analysis Date:	**3/12/2018**	SeqNo:	**1607731**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R49514**	RunNo: **49514**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.29	0.50								J
Sulfate	0.11	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R49514**	RunNo: **49514**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600222** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.6	90	110			
Chloride	4.7	0.50	5.000	0	93.2	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.7	90	110			
Bromide	2.4	0.10	2.500	0	94.5	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.9	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.9	90	110			
Sulfate	9.3	0.50	10.00	0	93.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600787** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.36	2.0								J
1-Methylnaphthalene	0.80	4.0								J
2-Methylnaphthalene	0.72	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600787** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	0.15	3.0								J
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	0.33	1.0								J
1,2,4-Trichlorobenzene	0.35	1.0								J
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600788** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600788** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	26	1.0	20.00	0	129	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID **1803072-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PW-4**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600790** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	60.5	137			
Toluene	20	1.0	20.00	0	99.9	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.5		10.00		94.5	70	130			

Sample ID **1803072-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PW-4**	Batch ID: **W49527**	RunNo: **49527**
Prep Date:	Analysis Date: **3/2/2018**	SeqNo: **1600791** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	60.5	137	2.12	20	
Toluene	19	1.0	20.00	0	97.3	70	130	2.69	20	
Chlorobenzene	20	1.0	20.00	0	102	70	130	0.557	20	
1,1-Dichloroethene	24	1.0	20.00	0	122	70	130	0.962	20	
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130	1.54	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		114	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		94.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **lcs-36823**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605966** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	71.4	39.7	103			
4-Chloro-3-methylphenol	180	10	200.0	0	90.4	40.5	108			
2-Chlorophenol	160	10	200.0	0	82.1	35	103			
1,4-Dichlorobenzene	71	10	100.0	0	71.1	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.3	35.6	91.4			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.2	41.6	114			
4-Nitrophenol	100	10	200.0	0	50.9	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	74.5	25.3	98.5			
Phenol	93	10	200.0	0	46.4	20.9	75.1			
Pyrene	88	10	100.0	0	87.9	45.6	108			
1,2,4-Trichlorobenzene	81	10	100.0	0	81.1	30.3	106			
Surr: 2-Fluorophenol	120		200.0		59.9	15	114			
Surr: Phenol-d5	97		200.0		48.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.8	15	161			
Surr: Nitrobenzene-d5	85		100.0		84.7	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.3	17.5	116			
Surr: 4-Terphenyl-d14	53		100.0		53.3	21	92.2			

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.6	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**	
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1803072**
23-Mar-18

Client: Andeavor Gallup
Project: 1st QTR 2018 GW Sampling (PW-4)

Sample ID **mb-36823**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **36823**	RunNo: **49662**	
Prep Date: **3/5/2018**	Analysis Date: **3/8/2018**	SeqNo: **1605967**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.8	15	114			
Surr: Phenol-d5	71		200.0		35.7	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.4	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.6	29.3	120			
Surr: 2-Fluorobiphenyl	60		100.0		59.8	17.5	116			
Surr: 4-Terphenyl-d14	41		100.0		41.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1803072 | RcptNo: 1

Received By: Anne Thorne 3/1/2018 2:50:00 PM

Completed By: Anne Thorne 3/2/2018 9:13:43 AM

Reviewed By: ENM 3/2/18 Logged By DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 5 (1) (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? NO
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: DDS

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 3/2/18 DDS

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (PW-4)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803072	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)	MAJOR CATIONS/ANIONS*	CYANIDE		Air Bubbles (Y or N)
3/1/18	0940	WATER	PW-4	40 mL VOA-5	HCL	-001										✓						
				1 L AMBER-2	NEAT	-001											✓					
				250 mL PLASTIC-1	HNO_3	-001												✓				
				125 mL PLASTIC-1	HNO_3	-001												✓	✓			
				125 mL PLASTIC-1	H_2SO_4	-001													✓			
				125 mL PLASTIC-1	NEAT	-001													✓			
↓	↓	↓	↓	500 mL PLASTIC-1	NaOH	-001														✓		
3/1/18	—	WATER	TRIP BLANK	40 mL VOA-3	HCL	-002										✓						

Date: 3/1/18 Time: 1450 Relinquished by:
Received by: Date Time 03/01/18 1450
Date: Time: Relinquished by:
Received by: Date Time

Remarks: all 4 coolers 1.0 AT 03/01/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	03/07/2018 12:14	WG1081006

Method Blank (MB)

(MB) R3291197-1 03/07/18 12:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	0.00235	J	0.00180	0.00500

L974914-02 Original Sample (OS) • Duplicate (DUP)

(OS) L974914-02 03/07/18 12:32 • (DUP) R3291197-7 03/07/18 12:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	0.00722	0.000	1	200	R1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3291197-2 03/07/18 12:02 • (LCSD) R3291197-3 03/07/18 12:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.112	0.112	112	112	85.0-115			0.000	20

L974545-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L974545-01 03/07/18 12:14 • (MS) R3291197-4 03/07/18 12:15 • (MSD) R3291197-5 03/07/18 12:16

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.101	0.0882	99.1	86.3	1	75.0-125			13.5	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 23, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 1st QTR 2018 GW Sampling OW OrderNo.: 1803089

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/2/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 10:10:00 AM
Lab ID: 1803089-001
Matrix: AQUEOUS
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 10:01:00 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.67	0.63	1.0	J	mg/L	1	3/7/2018 10:35:21 PM	36872
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2018 10:35:21 PM	36872
Surr: DNOP	109	0	77.5-161		%Rec	1	3/7/2018 10:35:21 PM	36872
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.9	0.025	0.050		mg/L	1	3/6/2018 11:34:51 AM	G49593
Surr: BFB	105	0	69.3-150		%Rec	1	3/6/2018 11:34:51 AM	G49593
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.12	0.00099	0.0020		mg/L	1	3/19/2018 9:29:40 PM	D49900
Cadmium	ND	0.0010	0.0020		mg/L	1	3/19/2018 9:29:40 PM	D49900
Chromium	ND	0.0013	0.0060		mg/L	1	3/19/2018 9:29:40 PM	D49900
Copper	ND	0.0032	0.0060		mg/L	1	3/19/2018 9:29:40 PM	D49900
Iron	0.064	0.016	0.020		mg/L	1	3/20/2018 7:37:17 PM	B49941
Manganese	0.040	0.00039	0.0020		mg/L	1	3/19/2018 9:29:40 PM	D49900
Silver	ND	0.0018	0.0050		mg/L	1	3/19/2018 9:29:40 PM	D49900
Zinc	0.0066	0.0021	0.010	J	mg/L	1	3/19/2018 9:29:40 PM	D49900
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.12	0.0010	0.0020		mg/L	1	3/14/2018 8:33:33 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/15/2018 6:29:41 PM	36893
Chromium	ND	0.0018	0.0060		mg/L	1	3/15/2018 6:29:41 PM	36893
Copper	ND	0.0041	0.0060		mg/L	1	3/14/2018 8:33:33 PM	36893
Iron	0.071	0.010	0.020		mg/L	1	3/14/2018 8:33:33 PM	36893
Manganese	0.042	0.0011	0.0020		mg/L	1	3/14/2018 8:33:33 PM	36893
Silver	0.0024	0.0012	0.0050	J	mg/L	1	3/14/2018 8:33:33 PM	36893
Zinc	ND	0.0033	0.010		mg/L	1	3/15/2018 6:29:41 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/14/2018 1:26:22 PM	B49783
Lead	0.00030	0.00017	0.00050	J	mg/L	1	3/13/2018 6:04:33 PM	B49749
Selenium	ND	0.0038	0.0050		mg/L	5	3/14/2018 1:26:22 PM	B49783
Uranium	0.035	0.00048	0.0025	*	mg/L	5	3/14/2018 1:26:22 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0029	0.0021	0.0050	J	mg/L	5	3/14/2018 11:38:26 AM	36893
Lead	ND	0.0011	0.0025		mg/L	5	3/14/2018 11:38:26 AM	36893
Selenium	ND	0.0049	0.0050		mg/L	5	3/14/2018 11:38:26 AM	36893
Uranium	0.040	0.00034	0.0025	*	mg/L	5	3/14/2018 11:38:26 AM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 10:10:00 AM
Lab ID: 1803089-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/15/2018 4:17:07 PM	37046
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	6.3	0.31	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Toluene	ND	0.32	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Ethylbenzene	ND	0.47	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Methyl tert-butyl ether (MTBE)	2900	12	50		µg/L	50	3/5/2018 7:48:20 PM	W49560
1,2,4-Trimethylbenzene	ND	0.56	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Naphthalene	ND	0.57	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
1-Methylnaphthalene	ND	0.80	20		µg/L	5	3/5/2018 8:17:26 PM	W49560
2-Methylnaphthalene	ND	0.76	20		µg/L	5	3/5/2018 8:17:26 PM	W49560
Acetone	4.9	4.1	50	J	µg/L	5	3/5/2018 8:17:26 PM	W49560
Bromobenzene	ND	0.70	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Bromodichloromethane	ND	0.88	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Bromoform	ND	1.1	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Bromomethane	ND	1.3	15		µg/L	5	3/5/2018 8:17:26 PM	W49560
2-Butanone	ND	5.7	50		µg/L	5	3/5/2018 8:17:26 PM	W49560
Carbon disulfide	ND	2.0	50		µg/L	5	3/5/2018 8:17:26 PM	W49560
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Chlorobenzene	ND	0.53	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Chloroethane	ND	1.2	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
Chloroform	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Chloromethane	ND	1.5	15		µg/L	5	3/5/2018 8:17:26 PM	W49560
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
Dibromochloromethane	ND	0.36	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Dibromomethane	ND	0.45	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 10:10:00 AM
Lab ID: 1803089-001 **Matrix:** AQUEOUS **Received Date:** 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
2,2-Dichloropropane	ND	0.79	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
2-Hexanone	ND	3.3	50		µg/L	5	3/5/2018 8:17:26 PM	W49560
Isopropylbenzene	ND	0.26	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	3/5/2018 8:17:26 PM	W49560
Methylene Chloride	ND	0.54	15		µg/L	5	3/5/2018 8:17:26 PM	W49560
n-Butylbenzene	ND	0.65	15		µg/L	5	3/5/2018 8:17:26 PM	W49560
n-Propylbenzene	ND	0.37	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
sec-Butylbenzene	1.1	0.55	5.0	J	µg/L	5	3/5/2018 8:17:26 PM	W49560
Styrene	ND	0.78	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	3/5/2018 8:17:26 PM	W49560
Vinyl chloride	ND	0.89	5.0		µg/L	5	3/5/2018 8:17:26 PM	W49560
Xylenes, Total	ND	1.6	7.5		µg/L	5	3/5/2018 8:17:26 PM	W49560
Surr: 1,2-Dichloroethane-d4	87.0	0	70-130		%Rec	5	3/5/2018 8:17:26 PM	W49560
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	5	3/5/2018 8:17:26 PM	W49560
Surr: Dibromofluoromethane	92.9	0	70-130		%Rec	5	3/5/2018 8:17:26 PM	W49560
Surr: Toluene-d8	94.8	0	70-130		%Rec	5	3/5/2018 8:17:26 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 1:50:00 PM
Lab ID: 1803089-002 **Matrix:** AQUEOUS **Received Date:** 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	3/7/2018 10:16:05 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	3/7/2018 11:47:40 PM	36872
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/7/2018 11:47:40 PM	36872
Surr: DNOP	108	0	77.5-161		%Rec	1	3/7/2018 11:47:40 PM	36872
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.060	0.025	0.050		mg/L	1	3/6/2018 12:22:34 PM	G49593
Surr: BFB	102	0	69.3-150		%Rec	1	3/6/2018 12:22:34 PM	G49593
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.018	0.00099	0.0020		mg/L	1	3/20/2018 5:22:41 PM	A49941
Cadmium	ND	0.0010	0.0020		mg/L	1	3/20/2018 5:22:41 PM	A49941
Chromium	ND	0.0013	0.0060		mg/L	1	3/20/2018 5:22:41 PM	A49941
Copper	ND	0.0032	0.0060		mg/L	1	3/20/2018 5:22:41 PM	A49941
Iron	ND	0.016	0.020		mg/L	1	3/20/2018 5:22:41 PM	A49941
Manganese	0.020	0.00039	0.0020		mg/L	1	3/20/2018 5:22:41 PM	A49941
Silver	ND	0.0018	0.0050		mg/L	1	3/20/2018 5:22:41 PM	A49941
Zinc	0.0074	0.0021	0.010	J	mg/L	1	3/20/2018 5:22:41 PM	A49941
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.021	0.0010	0.0020		mg/L	1	3/14/2018 8:35:33 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/15/2018 6:31:41 PM	36893
Chromium	ND	0.0018	0.0060		mg/L	1	3/15/2018 6:31:41 PM	36893
Copper	ND	0.0041	0.0060		mg/L	1	3/14/2018 8:35:33 PM	36893
Iron	ND	0.010	0.020		mg/L	1	3/14/2018 8:35:33 PM	36893
Manganese	0.021	0.0011	0.0020		mg/L	1	3/14/2018 8:35:33 PM	36893
Silver	ND	0.0012	0.0050		mg/L	1	3/14/2018 8:35:33 PM	36893
Zinc	ND	0.0033	0.010		mg/L	1	3/15/2018 6:31:41 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/14/2018 1:28:35 PM	B49783
Lead	ND	0.00017	0.00050		mg/L	1	3/13/2018 6:06:46 PM	B49749
Selenium	ND	0.0038	0.0050		mg/L	5	3/14/2018 1:28:35 PM	B49783
Uranium	0.014	0.00048	0.0025		mg/L	5	3/14/2018 1:28:35 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.00090	0.00041	0.0010	J	mg/L	1	3/14/2018 12:23:32 PM	36893
Lead	ND	0.00023	0.00050		mg/L	1	3/14/2018 12:23:32 PM	36893
Selenium	ND	0.00098	0.0010		mg/L	1	3/14/2018 12:23:32 PM	36893
Uranium	0.016	0.000068	0.00050		mg/L	1	3/14/2018 12:23:32 PM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 1:50:00 PM
Lab ID: 1803089-002 **Matrix:** AQUEOUS **Received Date:** 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/15/2018 4:19:20 PM	37046
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Toluene	ND	0.064	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Methyl tert-butyl ether (MTBE)	58	0.24	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2-Dichloroethane (EDC)	0.77	0.40	1.0	J	µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Naphthalene	ND	0.11	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Acetone	1.2	0.82	10	J	µg/L	1	3/5/2018 7:19:09 PM	W49560
Bromobenzene	ND	0.14	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Bromoform	ND	0.21	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Bromomethane	ND	0.26	3.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
2-Butanone	ND	1.1	10		µg/L	1	3/5/2018 7:19:09 PM	W49560
Carbon disulfide	ND	0.40	10		µg/L	1	3/5/2018 7:19:09 PM	W49560
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Chloroethane	ND	0.23	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Chloroform	ND	0.40	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Chloromethane	ND	0.29	3.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Dibromomethane	ND	0.091	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018 1:50:00 PM
Lab ID: 1803089-002
Matrix: AQUEOUS
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
2-Hexanone	ND	0.66	10		µg/L	1	3/5/2018 7:19:09 PM	W49560
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/5/2018 7:19:09 PM	W49560
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Styrene	ND	0.16	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/5/2018 7:19:09 PM	W49560
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/5/2018 7:19:09 PM	W49560
Surr: 1,2-Dichloroethane-d4	89.7	0	70-130		%Rec	1	3/5/2018 7:19:09 PM	W49560
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	3/5/2018 7:19:09 PM	W49560
Surr: Dibromofluoromethane	92.0	0	70-130		%Rec	1	3/5/2018 7:19:09 PM	W49560
Surr: Toluene-d8	93.8	0	70-130		%Rec	1	3/5/2018 7:19:09 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018
Lab ID: 1803089-003
Matrix: AQUEOUS
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	3/7/2018 10:31:10 PM	36883
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.63	0.63	1.0	J	mg/L	1	3/8/2018 12:11:50 AM	36872
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	3/8/2018 12:11:50 AM	36872
Surr: DNOP	113	0	77.5-161		%Rec	1	3/8/2018 12:11:50 AM	36872
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.8	0.025	0.050		mg/L	1	3/6/2018 12:46:29 PM	G49593
Surr: BFB	102	0	69.3-150		%Rec	1	3/6/2018 12:46:29 PM	G49593
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.11	0.00099	0.0020		mg/L	1	3/20/2018 5:24:41 PM	A49941
Cadmium	ND	0.0010	0.0020		mg/L	1	3/20/2018 5:24:41 PM	A49941
Chromium	ND	0.0013	0.0060		mg/L	1	3/20/2018 5:24:41 PM	A49941
Copper	0.0040	0.0032	0.0060	J	mg/L	1	3/20/2018 5:24:41 PM	A49941
Iron	0.066	0.016	0.020		mg/L	1	3/20/2018 5:24:41 PM	A49941
Manganese	0.040	0.00039	0.0020		mg/L	1	3/20/2018 5:24:41 PM	A49941
Silver	0.0024	0.0018	0.0050	J	mg/L	1	3/20/2018 5:24:41 PM	A49941
Zinc	0.0079	0.0021	0.010	J	mg/L	1	3/20/2018 5:24:41 PM	A49941
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.12	0.0010	0.0020		mg/L	1	3/14/2018 8:37:32 PM	36893
Cadmium	ND	0.00058	0.0020		mg/L	1	3/15/2018 6:33:40 PM	36893
Chromium	ND	0.0018	0.0060		mg/L	1	3/15/2018 6:33:40 PM	36893
Copper	0.0045	0.0041	0.0060	J	mg/L	1	3/14/2018 8:37:32 PM	36893
Iron	0.070	0.010	0.020		mg/L	1	3/14/2018 8:37:32 PM	36893
Manganese	0.041	0.0011	0.0020		mg/L	1	3/14/2018 8:37:32 PM	36893
Silver	0.0026	0.0012	0.0050	J	mg/L	1	3/14/2018 8:37:32 PM	36893
Zinc	ND	0.0033	0.010		mg/L	1	3/15/2018 6:33:40 PM	36893
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/14/2018 1:30:48 PM	B49783
Lead	0.00031	0.00017	0.00050	J	mg/L	1	3/13/2018 6:08:59 PM	B49749
Selenium	ND	0.0038	0.0050		mg/L	5	3/14/2018 1:30:48 PM	B49783
Uranium	0.034	0.00048	0.0025	*	mg/L	5	3/14/2018 1:30:48 PM	B49783
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	3/14/2018 11:48:27 AM	36893
Lead	ND	0.0011	0.0025		mg/L	5	3/14/2018 11:48:27 AM	36893
Selenium	ND	0.0049	0.0050		mg/L	5	3/14/2018 11:48:27 AM	36893
Uranium	0.039	0.00034	0.0025	*	mg/L	5	3/14/2018 11:48:27 AM	36893

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018
Lab ID: 1803089-003
Matrix: AQUEOUS
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	3/15/2018 4:21:34 PM	37046
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	5.9	0.31	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Toluene	ND	0.32	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Ethylbenzene	ND	0.47	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Methyl tert-butyl ether (MTBE)	2700	12	50		µg/L	50	3/5/2018 8:46:31 PM	W49560
1,2,4-Trimethylbenzene	ND	0.56	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Naphthalene	ND	0.57	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
1-Methylnaphthalene	ND	0.80	20		µg/L	5	3/5/2018 9:15:33 PM	W49560
2-Methylnaphthalene	ND	0.76	20		µg/L	5	3/5/2018 9:15:33 PM	W49560
Acetone	4.3	4.1	50	J	µg/L	5	3/5/2018 9:15:33 PM	W49560
Bromobenzene	ND	0.70	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Bromodichloromethane	ND	0.88	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Bromoform	ND	1.1	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Bromomethane	ND	1.3	15		µg/L	5	3/5/2018 9:15:33 PM	W49560
2-Butanone	ND	5.7	50		µg/L	5	3/5/2018 9:15:33 PM	W49560
Carbon disulfide	ND	2.0	50		µg/L	5	3/5/2018 9:15:33 PM	W49560
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Chlorobenzene	ND	0.53	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Chloroethane	ND	1.2	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
Chloroform	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Chloromethane	ND	1.5	15		µg/L	5	3/5/2018 9:15:33 PM	W49560
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
Dibromochloromethane	ND	0.36	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Dibromomethane	ND	0.45	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 1st QTR 2018 GW Sampling OW
Collection Date: 2/28/2018
Lab ID: 1803089-003
Matrix: AQUEOUS
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
2,2-Dichloropropane	ND	0.79	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
2-Hexanone	ND	3.3	50		µg/L	5	3/5/2018 9:15:33 PM	W49560
Isopropylbenzene	ND	0.26	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	3/5/2018 9:15:33 PM	W49560
Methylene Chloride	ND	0.54	15		µg/L	5	3/5/2018 9:15:33 PM	W49560
n-Butylbenzene	ND	0.65	15		µg/L	5	3/5/2018 9:15:33 PM	W49560
n-Propylbenzene	ND	0.37	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
sec-Butylbenzene	1.0	0.55	5.0	J	µg/L	5	3/5/2018 9:15:33 PM	W49560
Styrene	ND	0.78	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	3/5/2018 9:15:33 PM	W49560
Vinyl chloride	ND	0.89	5.0		µg/L	5	3/5/2018 9:15:33 PM	W49560
Xylenes, Total	ND	1.6	7.5		µg/L	5	3/5/2018 9:15:33 PM	W49560
Surr: 1,2-Dichloroethane-d4	87.3	0	70-130		%Rec	5	3/5/2018 9:15:33 PM	W49560
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	5	3/5/2018 9:15:33 PM	W49560
Surr: Dibromofluoromethane	90.7	0	70-130		%Rec	5	3/5/2018 9:15:33 PM	W49560
Surr: Toluene-d8	95.4	0	70-130		%Rec	5	3/5/2018 9:15:33 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1803089-004
Matrix: TRIP BLANK
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Toluene	ND	0.064	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Ethylbenzene	ND	0.093	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Naphthalene	ND	0.11	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Acetone	ND	0.82	10		µg/L	1	3/5/2018 6:49:56 PM	W49560
Bromobenzene	ND	0.14	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Bromodichloromethane	ND	0.18	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Bromoform	ND	0.21	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Bromomethane	ND	0.26	3.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
2-Butanone	ND	1.1	10		µg/L	1	3/5/2018 6:49:56 PM	W49560
Carbon disulfide	ND	0.40	10		µg/L	1	3/5/2018 6:49:56 PM	W49560
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Chlorobenzene	ND	0.11	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Chloroethane	ND	0.23	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Chloroform	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Chloromethane	ND	0.29	3.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Dibromochloromethane	ND	0.072	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Dibromomethane	ND	0.091	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 1st QTR 2018 GW Sampling OW
Collection Date:
Lab ID: 1803089-004
Matrix: TRIP BLANK
Received Date: 3/2/2018 9:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
2-Hexanone	ND	0.66	10		µg/L	1	3/5/2018 6:49:56 PM	W49560
Isopropylbenzene	ND	0.051	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	3/5/2018 6:49:56 PM	W49560
Methylene Chloride	ND	0.11	3.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
n-Butylbenzene	ND	0.13	3.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
n-Propylbenzene	ND	0.074	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Styrene	ND	0.16	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Vinyl chloride	ND	0.18	1.0		µg/L	1	3/5/2018 6:49:56 PM	W49560
Xylenes, Total	ND	0.32	1.5		µg/L	1	3/5/2018 6:49:56 PM	W49560
Surr: 1,2-Dichloroethane-d4	86.2	0	70-130		%Rec	1	3/5/2018 6:49:56 PM	W49560
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	3/5/2018 6:49:56 PM	W49560
Surr: Dibromofluoromethane	90.6	0	70-130		%Rec	1	3/5/2018 6:49:56 PM	W49560
Surr: Toluene-d8	93.7	0	70-130		%Rec	1	3/5/2018 6:49:56 PM	W49560

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	95.5	50	150			J
Chromium	0.0070	0.0060	0.006000	0	118	50	150			
Copper	0.0046	0.0060	0.006000	0	76.2	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Silver	0.0056	0.0050	0.005000	0	112	50	150			
Zinc	0.0046	0.010	0.005000	0	91.0	50	150			J

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0029	0.0020	0.002000	0	144	50	150			

Sample ID **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D49900**	RunNo: **49900**
Prep Date:	Analysis Date: **3/19/2018**	SeqNo: **1616063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.51	0.0060	0.5000	0	103	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.11	0.0050	0.1000	0	112	85	115			
Zinc	0.49	0.010	0.5000	0	98.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A49941**	RunNo: **49941**
Prep Date:	Analysis Date: **3/20/2018**	SeqNo: **1617066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A49941**	RunNo: **49941**
Prep Date:	Analysis Date: **3/20/2018**	SeqNo: **1617067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Chromium	0.0058	0.0060	0.006000	0	97.0	50	150			J
Copper	0.0058	0.0060	0.006000	0	95.8	50	150			J
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0046	0.0050	0.005000	0	91.8	50	150			J
Zinc	0.0052	0.010	0.005000	0	104	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A49941**	RunNo: **49941**
Prep Date:	Analysis Date: **3/20/2018**	SeqNo: **1617068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.49	0.020	0.5000	0	97.7	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Silver	0.11	0.0050	0.1000	0	109	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617070**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617071**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	95.7	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B49941**	RunNo:	**49941**					
Prep Date:		Analysis Date:	**3/20/2018**	SeqNo:	**1617073**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	99.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36893**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **36893**		RunNo: **49799**					
Prep Date:	**3/7/2018**	Analysis Date: **3/14/2018**		SeqNo: **1611541**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	0.0054	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-36893**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **36893**		RunNo: **49799**					
Prep Date:	**3/7/2018**	Analysis Date: **3/14/2018**		SeqNo: **1611542**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Copper	0.0052	0.0060	0.006000	0	86.0	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Sample ID	**LCS-36893**	SampType: **LCS**		TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **36893**		RunNo: **49799**					
Prep Date:	**3/7/2018**	Analysis Date: **3/14/2018**		SeqNo: **1611543**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID	**MB-36893**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **36893**		RunNo: **49832**					
Prep Date:	**3/7/2018**	Analysis Date: **3/15/2018**		SeqNo: **1612958**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Zinc	0.0034	0.010								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**LLLCS-36893**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612959**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0059	0.0060	0.006000	0	98.5	50	150			J
Zinc	0.0056	0.010	0.005000	0	111	50	150			J

Sample ID	**LCS-36893**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49832**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612960**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610029** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49749**	RunNo: **49749**
Prep Date:	Analysis Date: **3/13/2018**	SeqNo: **1610031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	96.2	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B49783**	RunNo: **49783**
Prep Date:	Analysis Date: **3/14/2018**	SeqNo: **1610861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.1	85	115			
Uranium	0.011	0.00050	0.01250	0	90.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606839**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606840**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0014	0.0010	0.001000	0	140	50	150			
Lead	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.6	50	150			J

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49686**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/9/2018**	SeqNo:	**1606841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	95.9	85	115			

Sample ID	**MB-36893**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609686**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-36893**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609687**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00077	0.0010	0.001000	0	77.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MSLCS-36893**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**36893**	RunNo:	**49759**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/13/2018**	SeqNo:	**1609688**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	86.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-37046**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**37046**	RunNo:	**49833**					
Prep Date:	**3/15/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612463**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-37046**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**37046**	RunNo:	**49833**					
Prep Date:	**3/15/2018**	Analysis Date:	**3/15/2018**	SeqNo:	**1612464**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID	**MB-36883**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**36883**	RunNo:	**49644**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1605053**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-36883**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**36883**	RunNo:	**49644**					
Prep Date:	**3/7/2018**	Analysis Date:	**3/7/2018**	SeqNo:	**1605054**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **1803089-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-30**	Batch ID: **36872**	RunNo: **49601**
Prep Date: **3/6/2018**	Analysis Date: **3/7/2018**	SeqNo: **1604372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.9	1.0	5.000	0.6696	124	83.3	151			
Surr: DNOP	0.57		0.5000		114	77.5	161			

Sample ID **1803089-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-30**	Batch ID: **36872**	RunNo: **49601**
Prep Date: **3/6/2018**	Analysis Date: **3/7/2018**	SeqNo: **1604373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.8	1.0	5.000	0.6696	123	83.3	151	0.697	20	
Surr: DNOP	0.56		0.5000		111	77.5	161	0	0	

Sample ID **LCS-36872**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **36872**	RunNo: **49601**
Prep Date: **3/6/2018**	Analysis Date: **3/7/2018**	SeqNo: **1604376** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	116	70	130			
Surr: DNOP	0.53		0.5000		105	77.5	161			

Sample ID **MB-36872**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **36872**	RunNo: **49601**
Prep Date: **3/6/2018**	Analysis Date: **3/7/2018**	SeqNo: **1604377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		115	77.5	161			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G49593**	RunNo: **49593**
Prep Date:	Analysis Date: **3/6/2018**	SeqNo: **1603037** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		100	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G49593**	RunNo: **49593**
Prep Date:	Analysis Date: **3/6/2018**	SeqNo: **1603038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.61	0.050	0.5000	0	122	75.8	123			
Surr: BFB	24		20.00		121	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602206** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602206** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602207** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.5	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1803089**

23-Mar-18

Client: Andeavor Gallup

Project: 1st QTR 2018 GW Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602207** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.2	70	130			
Surr: Toluene-d8	9.0		10.00		89.5	70	130			

Sample ID **1803089-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602266** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	100	5.0	100.0	6.301	95.0	60.5	137			
Toluene	100	5.0	100.0	0	103	70	130			
Chlorobenzene	100	5.0	100.0	0	104	70	130			
1,1-Dichloroethene	110	5.0	100.0	0	107	70	130			
Trichloroethene (TCE)	91	5.0	100.0	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	44		50.00		88.6	70	130			
Surr: 4-Bromofluorobenzene	53		50.00		105	70	130			
Surr: Dibromofluoromethane	46		50.00		91.4	70	130			
Surr: Toluene-d8	45		50.00		90.8	70	130			

Sample ID **1803089-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **W49560**	RunNo: **49560**
Prep Date:	Analysis Date: **3/5/2018**	SeqNo: **1602267** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	98	5.0	100.0	6.301	91.9	60.5	137	3.12	20	
Toluene	100	5.0	100.0	0	104	70	130	1.72	20	
Chlorobenzene	100	5.0	100.0	0	103	70	130	1.59	20	
1,1-Dichloroethene	100	5.0	100.0	0	104	70	130	2.86	20	
Trichloroethene (TCE)	90	5.0	100.0	0	90.5	70	130	0.863	20	
Surr: 1,2-Dichloroethane-d4	42		50.00		84.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	52		50.00		104	70	130	0	0	
Surr: Dibromofluoromethane	45		50.00		90.4	70	130	0	0	
Surr: Toluene-d8	47		50.00		94.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1803089 | RcptNo: 1

Received By: Mandy Woods 3/2/2018 9:55:00 AM

Completed By: Ashley Gallegos 3/2/2018 10:43:06 AM

Reviewed By: ENM 3/2/18 labeled by! DDJ

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DDJ

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: ANDEAVOR
GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD
GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.OBRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA OBRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.6° -0.5(CF) = 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803089	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1; 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)				Air Bubbles (Y or N)
2/28/18	1010	WATER	OW-30	40 ML VOA-5	HCL	-001			✓							✓						
				40 ML VOA-3	$NA_2S_2O_3$						✓											
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓				
	1350	WATER	OW-13	40 ML VOA-5	HCL	-002			✓							✓						
				40 ML VOA-3	$NA_2S_2O_3$						✓											
				250 ML AMBER-1	NEAT				✓													
				250 ML PLASTIC-1	HNO_3													✓				
				125 ML PLASTIC-1	HNO_3													✓				

Date	Time	Relinquished by	Received by	Date	Time
3/1/18	0700			3/2/18	0955
Date:	Time:	Relinquished by	Received by:	Date	Time

Remarks

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: ANDEAVOR GALLUP REFINERY
Mailing Address: 92 GIANT CROSSING RD GALLUP, NM 87301
Phone #: 505-722-0287
email or Fax#: JESSICA.L.O'BRIEN@ANDEAVOR.COM
QA/QC Package: ☐ Standard ☒ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time: ☒ Standard ☐ Rush
Project Name: 1ST QTR 2018 GW SAMPLING (OW)
Project #:
Project Manager: JESSICA O'BRIEN
Sampler: TRACY PAYNE
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.6° - 0.9 (CF) = 1.1°

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1803089	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method ~~504.1~~ 8011)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC METALS (TOTAL & DISSOLVED)				Air Bubbles (Y or N)
2/28/18	—	WATER	DUP13	40 ML VOA-5	HCL	-004			✓							✓						
"	"	"	"	40 ML VOA-3	$Na_2S_2O_3$						✓											
"	"	"	"	250 ML AMBER-1	NEAT				✓													
"	"	"	"	250 ML PLASTIC-1	HNO_3													✓				
↓	↓	↓	↓	125 ML PLASTIC-1	HNO_3													✓				
2/28/18	—	WATER	TRIP BLANK	40 ML VOA-3	HCL	-005										✓						

Date: 3/1/18 Time: 0700 Relinquished by:
Date: Time: Relinquished by:

Received by: COURIER 312 Date: 3/2/18 Time: 0950
Received by: Date: Time:

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 18, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling OW OrderNo.: 1805A27

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/18/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 8:25:00 AM
Lab ID: 1805A27-001
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/22/2018 11:46:02 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.72	0.63	1.0	J	mg/L	1	5/21/2018 10:00:36 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 10:00:36 PM	38203
Surr: DNOP	112	0	76.7-135		%Rec	1	5/21/2018 10:00:36 PM	38203
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.11	0.00099	0.0020		mg/L	1	6/4/2018 3:06:39 PM	B51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 3:06:39 PM	B51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 3:06:39 PM	B51699
Copper	0.0064	0.0032	0.0060		mg/L	1	6/4/2018 3:06:39 PM	B51699
Iron	0.061	0.016	0.020		mg/L	1	6/4/2018 3:06:39 PM	B51699
Manganese	0.052	0.00039	0.0020	*	mg/L	1	6/4/2018 3:06:39 PM	B51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 3:06:39 PM	B51699
Zinc	0.0064	0.0021	0.010	J	mg/L	1	6/4/2018 3:06:39 PM	B51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	6/8/2018 3:02:28 PM	38469
Cadmium	ND	0.00058	0.0020		mg/L	1	6/8/2018 3:02:28 PM	38469
Chromium	ND	0.0018	0.0060		mg/L	1	6/8/2018 3:02:28 PM	38469
Copper	0.0055	0.0041	0.0060	J	mg/L	1	6/8/2018 3:02:28 PM	38469
Iron	0.071	0.010	0.020		mg/L	1	6/8/2018 3:02:28 PM	38469
Manganese	0.053	0.0011	0.0020	*	mg/L	1	6/8/2018 3:02:28 PM	38469
Silver	ND	0.0012	0.0050		mg/L	1	6/8/2018 3:02:28 PM	38469
Zinc	ND	0.0033	0.010		mg/L	1	6/8/2018 3:02:28 PM	38469
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0046	0.00042	0.0010		mg/L	1	6/2/2018 10:11:46 PM	D51685
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 6:33:23 PM	C51888
Selenium	ND	0.0076	0.010		mg/L	10	6/14/2018 11:57:40 AM	B51982
Uranium	0.037	0.00048	0.0025	*	mg/L	5	6/11/2018 6:33:23 PM	C51888
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	6/5/2018 7:43:15 PM	38469
Lead	0.00043	0.00023	0.00050	J	mg/L	1	6/5/2018 7:43:15 PM	38469
Selenium	0.0033	0.00098	0.0010		mg/L	1	6/5/2018 7:43:15 PM	38469
Uranium	0.042	0.00034	0.0025	*	mg/L	5	6/12/2018 5:58:44 PM	38469
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000046	0.000037	0.00020	J	mg/L	1	6/6/2018 4:13:58 PM	38511
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 8:25:00 AM
Lab ID: 1805A27-001 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Methyl tert-butyl ether (MTBE)	3200	24	100		µg/L	100	5/22/2018 10:56:00 AM	R51422
1,2,4-Trimethylbenzene	0.29	0.11	1.0	J	µg/L	1	5/21/2018 6:38:00 PM	R51416
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Acetone	ND	0.82	10		µg/L	1	5/21/2018 6:38:00 PM	R51416
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 6:38:00 PM	R51416
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 6:38:00 PM	R51416
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 8:25:00 AM
Lab ID: 1805A27-001 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 6:38:00 PM	R51416
Isopropylbenzene	0.16	0.051	1.0	J	µg/L	1	5/21/2018 6:38:00 PM	R51416
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 6:38:00 PM	R51416
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
sec-Butylbenzene	1.4	0.11	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
tert-Butylbenzene	0.16	0.10	1.0	J	µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 6:38:00 PM	R51416
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 6:38:00 PM	R51416
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	5/21/2018 6:38:00 PM	R51416
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	5/21/2018 6:38:00 PM	R51416
Surr: Dibromofluoromethane	115	0	70-130		%Rec	1	5/21/2018 6:38:00 PM	R51416
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/21/2018 6:38:00 PM	R51416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	2.4	0.0097	0.050		mg/L	1	5/21/2018 3:00:43 PM	R51413
Surr: BFB	106	0	70-130		%Rec	1	5/21/2018 3:00:43 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:15:00 AM
Lab ID: 1805A27-002
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/23/2018 12:31:42 AM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 10:24:50 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 10:24:50 PM	38203
Surr: DNOP	107	0	76.7-135		%Rec	1	5/21/2018 10:24:50 PM	38203
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	6/4/2018 3:08:47 PM	B51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 3:08:47 PM	B51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 3:08:47 PM	B51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 3:08:47 PM	B51699
Iron	ND	0.016	0.020		mg/L	1	6/4/2018 3:08:47 PM	B51699
Manganese	ND	0.00039	0.0020		mg/L	1	6/4/2018 3:08:47 PM	B51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 3:08:47 PM	B51699
Zinc	0.0086	0.0021	0.010	J	mg/L	1	6/4/2018 3:08:47 PM	B51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	6/8/2018 3:04:36 PM	38469
Cadmium	ND	0.00058	0.0020		mg/L	1	6/8/2018 3:04:36 PM	38469
Chromium	ND	0.0018	0.0060		mg/L	1	6/8/2018 3:04:36 PM	38469
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2018 3:04:36 PM	38469
Iron	ND	0.010	0.020		mg/L	1	6/8/2018 3:04:36 PM	38469
Manganese	ND	0.0011	0.0020		mg/L	1	6/8/2018 3:04:36 PM	38469
Silver	ND	0.0012	0.0050		mg/L	1	6/8/2018 3:04:36 PM	38469
Zinc	ND	0.0033	0.010		mg/L	1	6/8/2018 3:04:36 PM	38469
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	6/2/2018 10:16:34 PM	D51685
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 6:38:11 PM	C51888
Selenium	ND	0.0038	0.0050		mg/L	5	6/11/2018 6:38:11 PM	C51888
Uranium	ND	0.000096	0.00050		mg/L	1	6/2/2018 10:16:34 PM	D51685
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	6/5/2018 7:46:57 PM	38469
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 7:46:57 PM	38469
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 7:46:57 PM	38469
Uranium	ND	0.000068	0.00050		mg/L	1	6/5/2018 7:46:57 PM	38469
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000047	0.000037	0.00020	J	mg/L	1	6/6/2018 4:16:13 PM	38511
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:15:00 AM
Lab ID: 1805A27-002
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/22/2018 11:20:00 AM	R51422
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Acetone	6.3	0.82	10	J	µg/L	1	5/21/2018 7:01:00 PM	R51416
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 7:01:00 PM	R51416
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 7:01:00 PM	R51416
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:15:00 AM
Lab ID: 1805A27-002 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 7:01:00 PM	R51416
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 7:01:00 PM	R51416
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 7:01:00 PM	R51416
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 7:01:00 PM	R51416
Surr: 1,2-Dichloroethane-d4	117	0	70-130		%Rec	1	5/21/2018 7:01:00 PM	R51416
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/21/2018 7:01:00 PM	R51416
Surr: Dibromofluoromethane	113	0	70-130		%Rec	1	5/21/2018 7:01:00 PM	R51416
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/21/2018 7:01:00 PM	R51416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 3:23:48 PM	R51413
Surr: BFB	109	0	70-130		%Rec	1	5/21/2018 3:23:48 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:40:00 AM
Lab ID: 1805A27-003 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/23/2018 12:46:51 AM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 10:49:03 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 10:49:03 PM	38203
Surr: DNOP	113	0	76.7-135		%Rec	1	5/21/2018 10:49:03 PM	38203
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.064	0.00099	0.0020		mg/L	1	6/4/2018 3:17:21 PM	B51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 3:17:21 PM	B51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 3:17:21 PM	B51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 3:17:21 PM	B51699
Iron	0.21	0.016	0.020		mg/L	1	6/4/2018 3:17:21 PM	B51699
Manganese	0.28	0.00039	0.0020	*	mg/L	1	6/4/2018 3:17:21 PM	B51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 3:17:21 PM	B51699
Zinc	0.011	0.0021	0.010		mg/L	1	6/4/2018 3:17:21 PM	B51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.070	0.0010	0.0020		mg/L	1	6/8/2018 3:06:46 PM	38469
Cadmium	ND	0.00058	0.0020		mg/L	1	6/8/2018 3:06:46 PM	38469
Chromium	ND	0.0018	0.0060		mg/L	1	6/8/2018 3:06:46 PM	38469
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2018 3:06:46 PM	38469
Iron	0.56	0.010	0.020	*	mg/L	1	6/8/2018 3:06:46 PM	38469
Manganese	0.32	0.0011	0.0020	*	mg/L	1	6/8/2018 3:06:46 PM	38469
Silver	ND	0.0012	0.0050		mg/L	1	6/8/2018 3:06:46 PM	38469
Zinc	0.0035	0.0033	0.010	J	mg/L	1	6/8/2018 3:06:46 PM	38469
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	6/11/2018 6:42:59 PM	C51888
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 6:42:59 PM	C51888
Selenium	0.0040	0.0038	0.0050	J	mg/L	5	6/11/2018 6:42:59 PM	C51888
Uranium	0.047	0.00048	0.0025	*	mg/L	5	6/11/2018 6:42:59 PM	C51888
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	6/13/2018 5:33:19 PM	38469
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 7:50:38 PM	38469
Selenium	0.0024	0.00098	0.0010		mg/L	1	6/5/2018 7:50:38 PM	38469
Uranium	0.054	0.00034	0.0025	*	mg/L	5	6/12/2018 6:03:44 PM	38469
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000043	0.000037	0.00020	J	mg/L	1	6/6/2018 4:23:07 PM	38511
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:40:00 AM
Lab ID: 1805A27-003
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.12	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Toluene	ND	0.13	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Ethylbenzene	ND	0.19	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Methyl tert-butyl ether (MTBE)	3800	24	100		µg/L	100	5/22/2018 11:44:00 AM	R51422
1,2,4-Trimethylbenzene	ND	0.23	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,3,5-Trimethylbenzene	ND	0.17	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2-Dibromoethane (EDB)	ND	0.26	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Naphthalene	ND	0.23	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1-Methylnaphthalene	ND	0.32	8.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
2-Methylnaphthalene	ND	0.30	8.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Acetone	ND	1.6	20		µg/L	2	5/21/2018 7:49:00 PM	R51416
Bromobenzene	ND	0.28	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Bromodichloromethane	ND	0.35	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Bromoform	ND	0.42	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Bromomethane	ND	0.51	6.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
2-Butanone	ND	2.3	20		µg/L	2	5/21/2018 7:49:00 PM	R51416
Carbon disulfide	ND	0.80	20		µg/L	2	5/21/2018 7:49:00 PM	R51416
Carbon Tetrachloride	ND	0.22	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Chlorobenzene	ND	0.21	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Chloroethane	ND	0.47	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Chloroform	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Chloromethane	ND	0.59	6.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
cis-1,2-DCE	ND	0.41	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
cis-1,3-Dichloropropene	ND	0.16	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2-Dibromo-3-chloropropane	ND	2.8	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Dibromochloromethane	ND	0.14	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Dibromomethane	ND	0.18	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2-Dichlorobenzene	ND	0.18	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,3-Dichlorobenzene	ND	0.30	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1-Dichloroethene	ND	0.16	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2-Dichloropropane	ND	0.20	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,3-Dichloropropane	ND	0.33	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
2,2-Dichloropropane	ND	0.31	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018 10:40:00 AM
Lab ID: 1805A27-003 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.19	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
2-Hexanone	ND	1.3	20		µg/L	2	5/21/2018 7:49:00 PM	R51416
Isopropylbenzene	ND	0.10	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
4-Isopropyltoluene	ND	0.19	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/21/2018 7:49:00 PM	R51416
Methylene Chloride	ND	0.22	6.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
n-Butylbenzene	ND	0.26	6.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
n-Propylbenzene	ND	0.15	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
sec-Butylbenzene	ND	0.22	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Styrene	ND	0.31	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
tert-Butylbenzene	ND	0.21	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1,1,2-Tetrachloroethane	ND	0.21	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1,2,2-Tetrachloroethane	ND	0.27	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Tetrachloroethene (PCE)	ND	0.26	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
trans-1,3-Dichloropropene	ND	0.44	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2,3-Trichlorobenzene	ND	0.23	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2,4-Trichlorobenzene	ND	0.28	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1,1-Trichloroethane	ND	0.15	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,1,2-Trichloroethane	ND	0.28	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Trichloroethene (TCE)	ND	0.22	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Trichlorofluoromethane	ND	0.37	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
1,2,3-Trichloropropane	ND	0.78	4.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Xylenes, Total	ND	0.64	3.0		µg/L	2	5/21/2018 7:49:00 PM	R51416
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	2	5/21/2018 7:49:00 PM	R51416
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	2	5/21/2018 7:49:00 PM	R51416
Surr: Dibromofluoromethane	109	0	70-130		%Rec	2	5/21/2018 7:49:00 PM	R51416
Surr: Toluene-d8	114	0	70-130		%Rec	2	5/21/2018 7:49:00 PM	R51416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	1.5	0.097	0.50		mg/L	10	5/21/2018 4:10:06 PM	R51413
Surr: BFB	108	0	70-130		%Rec	10	5/21/2018 4:10:06 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018
Lab ID: 1805A27-004
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/23/2018 1:02:02 AM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 11:13:19 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 11:13:19 PM	38203
Surr: DNOP	114	0	76.7-135		%Rec	1	5/21/2018 11:13:19 PM	38203
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.064	0.00099	0.0020		mg/L	1	6/4/2018 3:19:31 PM	B51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 3:19:31 PM	B51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 3:19:31 PM	B51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 3:19:31 PM	B51699
Iron	0.23	0.016	0.020		mg/L	1	6/4/2018 3:19:31 PM	B51699
Manganese	0.28	0.00039	0.0020	*	mg/L	1	6/4/2018 3:19:31 PM	B51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 3:19:31 PM	B51699
Zinc	0.010	0.0021	0.010		mg/L	1	6/4/2018 3:19:31 PM	B51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.069	0.0010	0.0020		mg/L	1	6/8/2018 3:08:57 PM	38469
Cadmium	ND	0.00058	0.0020		mg/L	1	6/8/2018 3:08:57 PM	38469
Chromium	ND	0.0018	0.0060		mg/L	1	6/8/2018 3:08:57 PM	38469
Copper	ND	0.0041	0.0060		mg/L	1	6/8/2018 3:08:57 PM	38469
Iron	0.55	0.010	0.020	*	mg/L	1	6/8/2018 3:08:57 PM	38469
Manganese	0.31	0.0011	0.0020	*	mg/L	1	6/8/2018 3:08:57 PM	38469
Silver	ND	0.0012	0.0050		mg/L	1	6/8/2018 3:08:57 PM	38469
Zinc	ND	0.0033	0.010		mg/L	1	6/8/2018 3:08:57 PM	38469
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	6/11/2018 6:47:47 PM	C51888
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 6:47:47 PM	C51888
Selenium	0.0040	0.0038	0.0050	J	mg/L	5	6/11/2018 6:47:47 PM	C51888
Uranium	0.048	0.00048	0.0025	*	mg/L	5	6/11/2018 6:47:47 PM	C51888
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	6/13/2018 5:35:39 PM	38469
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 7:54:20 PM	38469
Selenium	0.0023	0.00098	0.0010		mg/L	1	6/5/2018 7:54:20 PM	38469
Uranium	0.053	0.00034	0.0025	*	mg/L	5	6/12/2018 6:08:44 PM	38469
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000047	0.000037	0.00020	J	mg/L	1	6/6/2018 4:25:23 PM	38511
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018
Lab ID: 1805A27-004
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Methyl tert-butyl ether (MTBE)	3800	24	100		µg/L	100	5/22/2018 12:08:00 PM	R51422
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2-Dichloroethane (EDC)	0.58	0.40	1.0	J	µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Acetone	ND	0.82	10		µg/L	1	5/21/2018 8:37:00 PM	R51416
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 8:37:00 PM	R51416
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 8:37:00 PM	R51416
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/16/2018
Lab ID: 1805A27-004
Matrix: AQUEOUS
Received Date: 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 8:37:00 PM	R51416
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 8:37:00 PM	R51416
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 8:37:00 PM	R51416
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 8:37:00 PM	R51416
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	5/21/2018 8:37:00 PM	R51416
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/21/2018 8:37:00 PM	R51416
Surr: Dibromofluoromethane	113	0	70-130		%Rec	1	5/21/2018 8:37:00 PM	R51416
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/21/2018 8:37:00 PM	R51416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	2.8	0.0097	0.050		mg/L	1	5/21/2018 3:46:56 PM	R51413
Surr: BFB	106	0	70-130		%Rec	1	5/21/2018 3:46:56 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805A27-005 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/22/2018 12:32:00 PM	R51422
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Acetone	ND	0.82	10		µg/L	1	5/21/2018 9:01:00 PM	R51416
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 9:01:00 PM	R51416
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 9:01:00 PM	R51416
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805A27-005 **Matrix:** AQUEOUS **Received Date:** 5/18/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 9:01:00 PM	R51416
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 9:01:00 PM	R51416
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 9:01:00 PM	R51416
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 9:01:00 PM	R51416
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	5/21/2018 9:01:00 PM	R51416
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/21/2018 9:01:00 PM	R51416
Surr: Dibromofluoromethane	116	0	70-130		%Rec	1	5/21/2018 9:01:00 PM	R51416
Surr: Toluene-d8	114	0	70-130		%Rec	1	5/21/2018 9:01:00 PM	R51416
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 2:37:33 PM	R51413
Surr: BFB	104	0	70-130		%Rec	1	5/21/2018 2:37:33 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB-38469**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38469**	RunNo: **51825**
Prep Date: **6/4/2018**	Analysis Date: **6/7/2018**	SeqNo: **1692502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38469**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38469**	RunNo: **51825**
Prep Date: **6/4/2018**	Analysis Date: **6/7/2018**	SeqNo: **1692503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0016	0.0020	0.002000	0	80.0	50	150			J
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Zinc	0.0052	0.010	0.005000	0	103	50	150			J

Sample ID **LCS-38469**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38469**	RunNo: **51825**
Prep Date: **6/4/2018**	Analysis Date: **6/7/2018**	SeqNo: **1692504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.5	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.9	85	115			
Chromium	0.48	0.0060	0.5000	0	95.6	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.47	0.010	0.5000	0	93.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**
18-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0012	0.0010	0.001000	0	125	50	150			
Uranium	0.00054	0.00050	0.0005000	0	109	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686466** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.5	85	115			
Uranium	0.013	0.00050	0.01250	0	103	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51888**	RunNo: **51888**
Prep Date:	Analysis Date: **6/11/2018**	SeqNo: **1695916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51888**	RunNo: **51888**
Prep Date:	Analysis Date: **6/11/2018**	SeqNo: **1695917** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.3	50	150			J
Selenium	0.0012	0.0010	0.001000	0	118	50	150			
Uranium	0.00048	0.00050	0.0005000	0	96.8	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C51888**	RunNo:	**51888**					
Prep Date:		Analysis Date:	**6/11/2018**	SeqNo:	**1695918**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Lead	0.012	0.00050	0.01250	0	92.6	85	115			
Selenium	0.023	0.0010	0.02500	0	90.2	85	115			
Uranium	0.011	0.00050	0.01250	0	91.5	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B51982**	RunNo:	**51982**					
Prep Date:		Analysis Date:	**6/14/2018**	SeqNo:	**1700867**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51982**	RunNo:	**51982**					
Prep Date:		Analysis Date:	**6/14/2018**	SeqNo:	**1700868**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.00093	0.0010	0.001000	0	92.5	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B51982**	RunNo:	**51982**					
Prep Date:		Analysis Date:	**6/14/2018**	SeqNo:	**1700869**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38469**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38469**	RunNo:	**51758**					
Prep Date:	**6/4/2018**	Analysis Date:	**6/5/2018**	SeqNo:	**1689575**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38469**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38469**	RunNo:	**51758**					
Prep Date:	**6/4/2018**	Analysis Date:	**6/5/2018**	SeqNo:	**1689577**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	94.5	50	150			J
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00093	0.0010	0.001000	0	92.8	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID	**MSLCS-38469**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38469**	RunNo:	**51758**					
Prep Date:	**6/4/2018**	Analysis Date:	**6/5/2018**	SeqNo:	**1689579**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.013	0.00050	0.01250	0	104	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38511**	RunNo:	**51779**					
Prep Date:	**6/6/2018**	Analysis Date:	**6/6/2018**	SeqNo:	**1690603**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000044	0.00020								J

Sample ID	**LCS-38511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38511**	RunNo:	**51779**					
Prep Date:	**6/6/2018**	Analysis Date:	**6/6/2018**	SeqNo:	**1690604**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38219**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674912**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-38219**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1675515**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.071	0.010	0.1000	0	71.0	70	130			

Sample ID	**1805A27-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-30**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1675564**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.071	0.0092	0.09186	0	77.3	26.5	132			

Sample ID	**1805A27-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-30**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1675565**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.074	0.0093	0.09259	0	79.8	26.5	132	3.99	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **LCS-38203**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38203**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	70	130			
Surr: DNOP	0.49		0.5000		97.6	76.7	135			

Sample ID **MB-38203**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38203**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.0	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51416**	RunNo: **51416**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673420** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51416**	RunNo: **51416**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**
18-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **RB**	SampType: **MBLK**		TestCode: **EPA Method 8260B: VOLATILES**		
Client ID: **PBW**	Batch ID: **R51416**		RunNo: **51416**		
Prep Date:	Analysis Date: **5/21/2018**		SeqNo: **1673423**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51416**	RunNo: **51416**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		114	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51422**	RunNo: **51422**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1674376** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		115	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51422**	RunNo: **51422**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1674377** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		118	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A27**

18-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R51413**		RunNo:	**51413**					
Prep Date:		Analysis Date:	**5/21/2018**		SeqNo:	**1673176**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.49	0.050	0.5000	0	98.0	70	130			
Surr: BFB		9.9		10.00		99.1	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R51413**		RunNo:	**51413**					
Prep Date:		Analysis Date:	**5/21/2018**		SeqNo:	**1673177**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		11		10.00		108	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1805A27 RcptNo: 1

Received By: Michelle Garcia 5/18/2018 9:30:00 AM Michelle Garcia

Completed By: Michelle Garcia 5/18/2018 10:12:52 AM Michelle Garcia

Reviewed By: 05/18/18 Labeled by: JB 05/18/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 8 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? No
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: JB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805A27	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Air Bubbles (Y or N)
5/16/18	0825	H_2O	OW-30	40ml VOA-5	HCl	001			X							X			
				40ml VOA-3	$Na_2S_2O_3$						X								
				250 ml Amber-1	Neat				X										
				250 ml Plastic-1	HNO_3													X	
				125 ml Plastic-1	HNO_3													X	

Date	Time	Relinquished by:	Received by:	Date	Time
5/17/18	0700			05/18/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805A27	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
5/16/18	1015	H_2O	FB 14	40ml VOA-5	HCl	002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/17/18	0700			05/18/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805A77	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Air Bubbles (Y or N)
5/16/18	1040	H_2O	OW-29	40ml VOA-5	HCl	003			X							X			
				40ml VOA-3	$Na_2S_2O_3$						X								
				250 ml Amber-1	Neat				X										
				250 ml Plastic-1	HNO_3													X	
				125 ml Plastic-1	HNO_3													X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/17/18	0700			05/18/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805A27	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
5/16/18	—	H_2O	DUP13	40ml VOA-5	HCl	004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				
5/16/18	—	H_2O	TRIP BLANK	40mL VOA-3	HCL	005										X						

Date	Time	Relinquished by	Received by	Date	Time
5/17/18	0700			5/18/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 31, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 GW Sampling OW OrderNo.: 1805028

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/1/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**	
Arsenic	ND	0.0010		mg/L	1	5/14/2018 5:19:21 PM	B51261
Lead	ND	0.00050		mg/L	1	5/14/2018 5:19:21 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:19:21 PM	B51261
Uranium	ND	0.00050		mg/L	1	5/14/2018 5:19:21 PM	B51261
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Fluoride	ND	0.50		mg/L	5	5/8/2018 10:12:44 AM	R51153
Chloride	ND	2.5		mg/L	5	5/8/2018 10:12:44 AM	R51153
Bromide	ND	0.50		mg/L	5	5/8/2018 10:12:44 AM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 10:12:44 AM	R51153
Sulfate	ND	2.5		mg/L	5	5/8/2018 10:12:44 AM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 1:12:25 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**	
Barium	ND	0.0020		mg/L	1	5/10/2018 2:54:32 PM	A51175
Cadmium	ND	0.0020		mg/L	1	5/10/2018 2:54:32 PM	A51175
Calcium	ND	1.0		mg/L	1	5/10/2018 2:54:32 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 2:54:32 PM	A51175
Copper	ND	0.0060		mg/L	1	5/10/2018 2:54:32 PM	A51175
Iron	ND	0.020		mg/L	1	5/10/2018 2:54:32 PM	A51175
Magnesium	ND	1.0		mg/L	1	5/10/2018 2:54:32 PM	A51175
Manganese	ND	0.0020		mg/L	1	5/10/2018 2:54:32 PM	A51175
Potassium	ND	1.0		mg/L	1	5/15/2018 6:54:15 PM	A51298
Silver	ND	0.0050		mg/L	1	5/10/2018 2:54:32 PM	A51175
Sodium	ND	1.0		mg/L	1	5/10/2018 2:54:32 PM	A51175
Zinc	ND	0.010		mg/L	1	5/10/2018 2:54:32 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst: **pmf**	
Barium	ND	0.0020		mg/L	1	5/10/2018 10:28:01 PM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 5:06:32 PM	37989
Chromium	ND	0.0060		mg/L	1	5/10/2018 5:06:32 PM	37989
Copper	ND	0.0060		mg/L	1	5/10/2018 5:06:32 PM	37989
Iron	ND	0.020		mg/L	1	5/10/2018 5:06:32 PM	37989
Manganese	ND	0.0020		mg/L	1	5/10/2018 5:06:32 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:02:46 AM	37989
Zinc	ND	0.010		mg/L	1	5/10/2018 5:06:32 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Arsenic	ND	0.0010		mg/L	1	5/9/2018 10:23:25 AM	37989
Lead	ND	0.00050		mg/L	1	5/9/2018 10:23:25 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:23:25 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	ND	0.00050		mg/L	1	5/9/2018 10:23:25 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/3/2018 5:18:30 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 5:18:30 PM	37932
Surr: DNOP	119	76.7-135		%Rec	1	5/3/2018 5:18:30 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/4/2018 10:39:49 PM	G51049
Surr: BFB	85.0	69.3-150		%Rec	1	5/4/2018 10:39:49 PM	G51049
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Aniline	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzoic acid	ND	20		µg/L	1	5/10/2018 11:23:11 AM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4-Dimethylphenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
1-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Methylphenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Naphthalene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 11:23:11 AM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Phenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 11:23:11 AM	37947
Surr: 2-Fluorophenol	39.4	15-114		%Rec	1	5/10/2018 11:23:11 AM	37947
Surr: Phenol-d5	25.3	15-97.9		%Rec	1	5/10/2018 11:23:11 AM	37947
Surr: 2,4,6-Tribromophenol	57.2	15-161		%Rec	1	5/10/2018 11:23:11 AM	37947
Surr: Nitrobenzene-d5	56.9	29.3-120		%Rec	1	5/10/2018 11:23:11 AM	37947
Surr: 2-Fluorobiphenyl	54.2	17.5-116		%Rec	1	5/10/2018 11:23:11 AM	37947
Surr: 4-Terphenyl-d14	57.6	21-92.2		%Rec	1	5/10/2018 11:23:11 AM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 4:38:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 4:38:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 4:38:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 4:38:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 4:38:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 4:38:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 4:38:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	5/4/2018 4:38:00 PM	R51047
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	5/4/2018 4:38:00 PM	R51047
Surr: Dibromofluoromethane	109	70-130		%Rec	1	5/4/2018 4:38:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:25:00 AM
Lab ID: 1805028-001
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	113	70-130		%Rec	1	5/4/2018 4:38:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**	
Arsenic	ND	0.0010		mg/L	1	5/14/2018 5:34:29 PM	B51261
Lead	ND	0.00050		mg/L	1	5/14/2018 5:34:29 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:34:29 PM	B51261
Uranium	ND	0.00050		mg/L	1	5/14/2018 5:34:29 PM	B51261
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Fluoride	ND	0.50		mg/L	5	5/8/2018 10:38:05 AM	R51153
Chloride	ND	2.5		mg/L	5	5/8/2018 10:38:05 AM	R51153
Bromide	ND	0.50		mg/L	5	5/8/2018 10:38:05 AM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 10:38:05 AM	R51153
Sulfate	ND	2.5		mg/L	5	5/8/2018 10:38:05 AM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 1:25:17 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**	
Barium	ND	0.0020		mg/L	1	5/10/2018 2:56:53 PM	A51175
Cadmium	ND	0.0020		mg/L	1	5/10/2018 2:56:53 PM	A51175
Calcium	ND	1.0		mg/L	1	5/10/2018 2:56:53 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 2:56:53 PM	A51175
Copper	ND	0.0060		mg/L	1	5/10/2018 2:56:53 PM	A51175
Iron	ND	0.020		mg/L	1	5/10/2018 2:56:53 PM	A51175
Magnesium	ND	1.0		mg/L	1	5/10/2018 2:56:53 PM	A51175
Manganese	ND	0.0020		mg/L	1	5/10/2018 2:56:53 PM	A51175
Potassium	ND	1.0		mg/L	1	5/15/2018 6:56:27 PM	A51298
Silver	ND	0.0050		mg/L	1	5/10/2018 2:56:53 PM	A51175
Sodium	ND	1.0		mg/L	1	5/10/2018 2:56:53 PM	A51175
Zinc	ND	0.010		mg/L	1	5/10/2018 2:56:53 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst: **pmf**	
Barium	ND	0.0020		mg/L	1	5/10/2018 10:40:23 PM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 5:08:54 PM	37989
Chromium	ND	0.0060		mg/L	1	5/10/2018 5:08:54 PM	37989
Copper	ND	0.0060		mg/L	1	5/10/2018 5:08:54 PM	37989
Iron	ND	0.020		mg/L	1	5/10/2018 5:08:54 PM	37989
Manganese	ND	0.0020		mg/L	1	5/10/2018 5:08:54 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:04:54 AM	37989
Zinc	ND	0.010		mg/L	1	5/10/2018 5:08:54 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Arsenic	ND	0.0010		mg/L	1	5/9/2018 10:25:42 AM	37989
Lead	ND	0.00050		mg/L	1	5/9/2018 10:25:42 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:25:42 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	ND	0.00050		mg/L	1	5/9/2018 10:25:42 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/3/2018 6:24:57 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 6:24:57 PM	37932
Surr: DNOP	122	76.7-135		%Rec	1	5/3/2018 6:24:57 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/4/2018 11:03:12 PM	G51049
Surr: BFB	85.8	69.3-150		%Rec	1	5/4/2018 11:03:12 PM	G51049
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Aniline	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzoic acid	ND	20		µg/L	1	5/10/2018 11:51:02 AM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4-Dimethylphenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
1-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Methylphenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Naphthalene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 11:51:02 AM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Phenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 11:51:02 AM	37947
Surr: 2-Fluorophenol	47.8	15-114		%Rec	1	5/10/2018 11:51:02 AM	37947
Surr: Phenol-d5	31.4	15-97.9		%Rec	1	5/10/2018 11:51:02 AM	37947
Surr: 2,4,6-Tribromophenol	72.7	15-161		%Rec	1	5/10/2018 11:51:02 AM	37947
Surr: Nitrobenzene-d5	73.0	29.3-120		%Rec	1	5/10/2018 11:51:02 AM	37947
Surr: 2-Fluorobiphenyl	71.5	17.5-116		%Rec	1	5/10/2018 11:51:02 AM	37947
Surr: 4-Terphenyl-d14	70.3	21-92.2		%Rec	1	5/10/2018 11:51:02 AM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Toluene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Ethylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Naphthalene	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 5:01:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 5:01:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 5:01:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 5:01:00 PM	R51047
Isopropylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
4-Isopropyltoluene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 5:01:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
n-Propylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 5:01:00 PM	R51047
Xylenes, Total	ND	1.5		µg/L	1	5/4/2018 5:01:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	5/4/2018 5:01:00 PM	R51047
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/4/2018 5:01:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/4/2018 5:01:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 9:50:00 AM
Lab ID: 1805028-002
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	114	70-130		%Rec	1	5/4/2018 5:01:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Arsenic	0.012	0.0010	*	mg/L	1	5/14/2018 5:37:30 PM	B51261
Lead	ND	0.00050		mg/L	1	5/14/2018 5:37:30 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:37:30 PM	B51261
Uranium	ND	0.00050		mg/L	1	5/14/2018 5:37:30 PM	B51261
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	ND	0.50		mg/L	5	5/8/2018 11:03:47 AM	R51153
Chloride	94	10		mg/L	20	5/8/2018 11:16:38 AM	R51153
Bromide	0.51	0.50		mg/L	5	5/8/2018 11:03:47 AM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 11:03:47 AM	R51153
Sulfate	ND	2.5		mg/L	5	5/8/2018 11:03:47 AM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 1:38:08 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**pmf**
Barium	4.0	0.010	*	mg/L	5	5/17/2018 10:28:27 PM	A51355
Cadmium	ND	0.0020		mg/L	1	5/10/2018 2:59:15 PM	A51175
Calcium	82	1.0		mg/L	1	5/10/2018 2:59:15 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 2:59:15 PM	A51175
Copper	ND	0.0060		mg/L	1	5/10/2018 2:59:15 PM	A51175
Iron	5.5	0.20	*	mg/L	10	5/10/2018 8:34:50 PM	C51175
Magnesium	16	1.0		mg/L	1	5/10/2018 2:59:15 PM	A51175
Manganese	0.92	0.0020	*	mg/L	1	5/10/2018 2:59:15 PM	A51175
Potassium	ND	1.0		mg/L	1	5/17/2018 10:06:36 PM	A51355
Silver	ND	0.0050		mg/L	1	5/10/2018 2:59:15 PM	A51175
Sodium	300	5.0		mg/L	5	5/17/2018 10:28:27 PM	A51355
Zinc	0.011	0.010		mg/L	1	5/10/2018 2:59:15 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst:	**pmf**
Barium	4.0	0.010	*	mg/L	5	5/18/2018 1:17:02 AM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 5:11:17 PM	37989
Chromium	ND	0.0060		mg/L	1	5/10/2018 5:11:17 PM	37989
Copper	ND	0.0060		mg/L	1	5/10/2018 5:11:17 PM	37989
Iron	5.8	0.20	*	mg/L	10	5/15/2018 5:37:00 PM	37989
Manganese	1.0	0.010	*	mg/L	5	5/10/2018 10:44:38 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:15:02 AM	37989
Zinc	ND	0.010		mg/L	1	5/10/2018 5:11:17 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst:	**ELS**
Arsenic	0.014	0.0010	*	mg/L	1	5/9/2018 10:27:58 AM	37989
Lead	ND	0.00050		mg/L	1	5/9/2018 10:27:58 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:27:58 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	ND	0.00050		mg/L	1	5/9/2018 10:27:58 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	5.6	1.0		mg/L	1	5/3/2018 6:47:04 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 6:47:04 PM	37932
Surr: DNOP	122	76.7-135		%Rec	1	5/3/2018 6:47:04 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	29	1.0		mg/L	20	5/4/2018 11:26:35 PM	G51049
Surr: BFB	114	69.3-150		%Rec	20	5/4/2018 11:26:35 PM	G51049
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Aniline	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzoic acid	ND	20		µg/L	1	5/10/2018 12:18:54 PM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4-Dimethylphenol	13	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
1-Methylnaphthalene	57	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Methylnaphthalene	69	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Methylphenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Naphthalene	190	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 12:18:54 PM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Phenol	17	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 12:18:54 PM	37947
Surr: 2-Fluorophenol	35.4	15-114		%Rec	1	5/10/2018 12:18:54 PM	37947
Surr: Phenol-d5	29.0	15-97.9		%Rec	1	5/10/2018 12:18:54 PM	37947
Surr: 2,4,6-Tribromophenol	87.4	15-161		%Rec	1	5/10/2018 12:18:54 PM	37947
Surr: Nitrobenzene-d5	55.7	29.3-120		%Rec	1	5/10/2018 12:18:54 PM	37947
Surr: 2-Fluorobiphenyl	60.8	17.5-116		%Rec	1	5/10/2018 12:18:54 PM	37947
Surr: 4-Terphenyl-d14	64.8	21-92.2		%Rec	1	5/10/2018 12:18:54 PM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	8900	500		µg/L	500	5/7/2018 3:23:00 PM	R51091
Toluene	120	50		µg/L	50	5/7/2018 3:47:00 PM	R51091
Ethylbenzene	1400	50		µg/L	50	5/7/2018 3:47:00 PM	R51091
Methyl tert-butyl ether (MTBE)	37	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2,4-Trimethylbenzene	22	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,3,5-Trimethylbenzene	43	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Naphthalene	400	100		µg/L	50	5/7/2018 3:47:00 PM	R51091
1-Methylnaphthalene	110	100		µg/L	50	5/7/2018 3:47:00 PM	R51091
2-Methylnaphthalene	120	100		µg/L	50	5/7/2018 3:47:00 PM	R51091
Acetone	330	250		µg/L	50	5/7/2018 3:47:00 PM	R51091
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
2-Butanone	100	10		µg/L	1	5/4/2018 5:25:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 5:25:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 5:25:00 PM	R51047
Isopropylbenzene	58	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
4-Isopropyltoluene	4.6	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 5:25:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
n-Butylbenzene	24	3.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
n-Propylbenzene	200	50		µg/L	50	5/7/2018 3:47:00 PM	R51091
sec-Butylbenzene	10	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 5:25:00 PM	R51047
Xylenes, Total	680	75		µg/L	50	5/7/2018 3:47:00 PM	R51091
Surr: 1,2-Dichloroethane-d4	124	70-130		%Rec	1	5/4/2018 5:25:00 PM	R51047
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	5/4/2018 5:25:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/4/2018 5:25:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 10:30:00 AM
Lab ID: 1805028-003
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	108	70-130		%Rec	1	5/4/2018 5:25:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Arsenic	0.0089	0.0010		mg/L	1	5/14/2018 5:40:31 PM	B51261
Lead	0.0034	0.00050		mg/L	1	5/14/2018 5:40:31 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:40:31 PM	B51261
Uranium	0.026	0.0025		mg/L	5	5/16/2018 2:49:12 PM	A51316
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	3.7	0.50		mg/L	5	5/8/2018 11:29:30 AM	R51153
Chloride	62	2.5		mg/L	5	5/8/2018 11:29:30 AM	R51153
Bromide	1.6	0.50		mg/L	5	5/8/2018 11:29:30 AM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 11:29:30 AM	R51153
Sulfate	40	2.5		mg/L	5	5/8/2018 11:29:30 AM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 1:51:00 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**pmf**
Barium	0.35	0.0020		mg/L	1	5/10/2018 3:01:26 PM	A51175
Cadmium	ND	0.0020		mg/L	1	5/10/2018 3:01:26 PM	A51175
Calcium	18	1.0		mg/L	1	5/10/2018 3:01:26 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 3:01:26 PM	A51175
Copper	0.0090	0.0060		mg/L	1	5/10/2018 3:01:26 PM	A51175
Iron	0.93	0.10	*	mg/L	5	5/10/2018 8:36:49 PM	C51175
Magnesium	5.1	1.0		mg/L	1	5/10/2018 3:01:26 PM	A51175
Manganese	0.44	0.0020	*	mg/L	1	5/10/2018 3:01:26 PM	A51175
Potassium	3.0	1.0		mg/L	1	5/15/2018 7:12:30 PM	A51298
Silver	ND	0.0050		mg/L	1	5/10/2018 3:01:26 PM	A51175
Sodium	460	5.0		mg/L	5	5/17/2018 10:32:49 PM	A51355
Zinc	ND	0.010		mg/L	1	5/10/2018 3:01:26 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst:	**pmf**
Barium	1.1	0.010		mg/L	5	5/18/2018 1:21:12 AM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 10:46:36 PM	37989
Chromium	0.020	0.0060		mg/L	1	5/10/2018 10:46:36 PM	37989
Copper	0.032	0.0060		mg/L	1	5/10/2018 5:25:13 PM	37989
Iron	13	0.40	*	mg/L	20	5/10/2018 10:48:31 PM	37989
Manganese	1.0	0.0020	*	mg/L	1	5/10/2018 5:25:13 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:19:16 AM	37989
Zinc	0.011	0.010		mg/L	1	5/10/2018 5:25:13 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst:	**ELS**
Arsenic	0.011	0.0010	*	mg/L	1	5/9/2018 10:30:15 AM	37989
Lead	0.015	0.00050		mg/L	1	5/9/2018 10:30:15 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:30:15 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	0.031	0.0025	*	mg/L	5	5/9/2018 10:45:03 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	2.8	1.0		mg/L	1	5/3/2018 7:09:12 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 7:09:12 PM	37932
Surr: DNOP	119	76.7-135		%Rec	1	5/3/2018 7:09:12 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	17	1.0		mg/L	20	5/5/2018 12:36:41 AM	G51049
Surr: BFB	180	69.3-150	S	%Rec	20	5/5/2018 12:36:41 AM	G51049
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Aniline	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzoic acid	ND	20		µg/L	1	5/10/2018 1:42:54 PM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4-Dimethylphenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
1-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Methylphenol	31	10		µg/L	1	5/10/2018 1:42:54 PM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Naphthalene	18	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 1:42:54 PM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Phenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 1:42:54 PM	37947
Surr: 2-Fluorophenol	13.4	15-114	S	%Rec	1	5/10/2018 1:42:54 PM	37947
Surr: Phenol-d5	33.1	15-97.9		%Rec	1	5/10/2018 1:42:54 PM	37947
Surr: 2,4,6-Tribromophenol	87.1	15-161		%Rec	1	5/10/2018 1:42:54 PM	37947
Surr: Nitrobenzene-d5	67.6	29.3-120		%Rec	1	5/10/2018 1:42:54 PM	37947
Surr: 2-Fluorobiphenyl	73.5	17.5-116		%Rec	1	5/10/2018 1:42:54 PM	37947
Surr: 4-Terphenyl-d14	76.9	21-92.2		%Rec	1	5/10/2018 1:42:54 PM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	590	50		µg/L	50	5/7/2018 4:12:00 PM	R51091
Toluene	1600	50		µg/L	50	5/7/2018 4:12:00 PM	R51091
Ethylbenzene	360	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2,4-Trimethylbenzene	1200	50		µg/L	50	5/7/2018 4:12:00 PM	R51091
1,3,5-Trimethylbenzene	280	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Naphthalene	53	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
1-Methylnaphthalene	25	20		µg/L	5	5/4/2018 5:49:00 PM	R51047
2-Methylnaphthalene	26	20		µg/L	5	5/4/2018 5:49:00 PM	R51047
Acetone	ND	50		µg/L	5	5/4/2018 5:49:00 PM	R51047
Bromobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Bromodichloromethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Bromoform	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Bromomethane	ND	15		µg/L	5	5/4/2018 5:49:00 PM	R51047
2-Butanone	ND	50		µg/L	5	5/4/2018 5:49:00 PM	R51047
Carbon disulfide	ND	50		µg/L	5	5/4/2018 5:49:00 PM	R51047
Carbon Tetrachloride	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Chlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Chloroethane	ND	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
Chloroform	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Chloromethane	ND	15		µg/L	5	5/4/2018 5:49:00 PM	R51047
2-Chlorotoluene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
4-Chlorotoluene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
cis-1,2-DCE	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
Dibromochloromethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2-Dichlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,3-Dichlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,4-Dichlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Dichlorodifluoromethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1-Dichloroethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1-Dichloroethene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2-Dichloropropane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,3-Dichloropropane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
2,2-Dichloropropane	ND	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1-Dichloropropene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Hexachlorobutadiene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
2-Hexanone	ND	50		µg/L	5	5/4/2018 5:49:00 PM	R51047
Isopropylbenzene	180	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
4-Isopropyltoluene	38	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
4-Methyl-2-pentanone	ND	50		µg/L	5	5/4/2018 5:49:00 PM	R51047
Methylene Chloride	ND	15		µg/L	5	5/4/2018 5:49:00 PM	R51047
n-Butylbenzene	20	15		µg/L	5	5/4/2018 5:49:00 PM	R51047
n-Propylbenzene	170	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
sec-Butylbenzene	58	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Styrene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
tert-Butylbenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
trans-1,2-DCE	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1,1-Trichloroethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,1,2-Trichloroethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Trichloroethene (TCE)	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Trichlorofluoromethane	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
1,2,3-Trichloropropane	ND	10		µg/L	5	5/4/2018 5:49:00 PM	R51047
Vinyl chloride	ND	5.0		µg/L	5	5/4/2018 5:49:00 PM	R51047
Xylenes, Total	3200	75		µg/L	50	5/7/2018 4:12:00 PM	R51091
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	5	5/4/2018 5:49:00 PM	R51047
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	5	5/4/2018 5:49:00 PM	R51047
Surr: Dibromofluoromethane	110	70-130		%Rec	5	5/4/2018 5:49:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 1:00:00 PM
Lab ID: 1805028-004 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	114	70-130		%Rec	5	5/4/2018 5:49:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBK**
Arsenic	0.012	0.0010	*	mg/L	1	5/14/2018 5:43:32 PM	B51261
Lead	ND	0.00050		mg/L	1	5/14/2018 5:43:32 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:43:32 PM	B51261
Uranium	0.039	0.0025	*	mg/L	5	5/16/2018 2:58:44 PM	A51316
EPA METHOD 300.0: ANIONS						Analyst:	**smb**
Fluoride	0.72	0.50		mg/L	5	5/8/2018 12:20:57 PM	R51153
Chloride	47	2.5		mg/L	5	5/8/2018 12:20:57 PM	R51153
Bromide	ND	0.50		mg/L	5	5/8/2018 12:20:57 PM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 12:20:57 PM	R51153
Sulfate	91	2.5		mg/L	5	5/8/2018 12:20:57 PM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 2:03:52 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**pmf**
Barium	0.061	0.0020		mg/L	1	5/10/2018 3:11:54 PM	A51175
Cadmium	ND	0.0020		mg/L	1	5/10/2018 3:11:54 PM	A51175
Calcium	22	1.0		mg/L	1	5/10/2018 3:11:54 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 3:11:54 PM	A51175
Copper	ND	0.0060		mg/L	1	5/10/2018 3:11:54 PM	A51175
Iron	0.067	0.020		mg/L	1	5/10/2018 3:11:54 PM	A51175
Magnesium	3.4	1.0		mg/L	1	5/10/2018 3:11:54 PM	A51175
Manganese	0.18	0.0020	*	mg/L	1	5/10/2018 3:11:54 PM	A51175
Potassium	2.8	1.0		mg/L	1	5/15/2018 7:16:21 PM	A51298
Silver	ND	0.0050		mg/L	1	5/17/2018 10:34:53 PM	A51355
Sodium	190	5.0		mg/L	5	5/17/2018 10:37:01 PM	A51355
Zinc	ND	0.010		mg/L	1	5/10/2018 3:11:54 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst:	**pmf**
Barium	0.24	0.0020		mg/L	1	5/18/2018 1:22:59 AM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 10:50:17 PM	37989
Chromium	0.012	0.0060		mg/L	1	5/10/2018 10:50:17 PM	37989
Copper	0.0092	0.0060		mg/L	1	5/10/2018 5:27:13 PM	37989
Iron	7.6	0.20	*	mg/L	10	5/10/2018 10:52:09 PM	37989
Manganese	0.44	0.0020	*	mg/L	1	5/10/2018 5:27:13 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:22:59 AM	37989
Zinc	0.024	0.010		mg/L	1	5/10/2018 5:27:13 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst:	**ELS**
Arsenic	0.014	0.0010	*	mg/L	1	5/9/2018 10:32:31 AM	37989
Lead	0.0049	0.00050		mg/L	1	5/9/2018 10:32:31 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:32:31 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	0.035	0.0025	*	mg/L	5	5/9/2018 10:47:20 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/3/2018 7:31:29 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 7:31:29 PM	37932
Surr: DNOP	123	76.7-135		%Rec	1	5/3/2018 7:31:29 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	7.8	0.50		mg/L	10	5/5/2018 8:18:21 PM	G51065
Surr: BFB	96.1	69.3-150		%Rec	10	5/5/2018 8:18:21 PM	G51065
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Aniline	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzoic acid	ND	20		µg/L	1	5/10/2018 2:11:02 PM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4-Dimethylphenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
1-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Methylnaphthalene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Methylphenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Naphthalene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 2:11:02 PM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Phenol	72	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 2:11:02 PM	37947
Surr: 2-Fluorophenol	40.9	15-114		%Rec	1	5/10/2018 2:11:02 PM	37947
Surr: Phenol-d5	27.0	15-97.9		%Rec	1	5/10/2018 2:11:02 PM	37947
Surr: 2,4,6-Tribromophenol	61.2	15-161		%Rec	1	5/10/2018 2:11:02 PM	37947
Surr: Nitrobenzene-d5	60.7	29.3-120		%Rec	1	5/10/2018 2:11:02 PM	37947
Surr: 2-Fluorobiphenyl	65.0	17.5-116		%Rec	1	5/10/2018 2:11:02 PM	37947
Surr: 4-Terphenyl-d14	53.5	21-92.2		%Rec	1	5/10/2018 2:11:02 PM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	3900	100		µg/L	100	5/7/2018 4:36:00 PM	R51091
Toluene	39	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Ethylbenzene	6.2	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Methyl tert-butyl ether (MTBE)	1.2	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2,4-Trimethylbenzene	6.1	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,3,5-Trimethylbenzene	17	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Naphthalene	2.9	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
2-Methylnaphthalene	ND	4.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Acetone	ND	10		µg/L	1	5/4/2018 6:13:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
2-Butanone	ND	10		µg/L	1	5/4/2018 6:13:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 6:13:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 6:13:00 PM	R51047
Isopropylbenzene	3.0	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
4-Isopropyltoluene	2.3	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 6:13:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
n-Butylbenzene	ND	3.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
n-Propylbenzene	1.5	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
sec-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 6:13:00 PM	R51047
Xylenes, Total	120	1.5		µg/L	1	5/4/2018 6:13:00 PM	R51047
Surr: 1,2-Dichloroethane-d4	117	70-130		%Rec	1	5/4/2018 6:13:00 PM	R51047
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/4/2018 6:13:00 PM	R51047
Surr: Dibromofluoromethane	109	70-130		%Rec	1	5/4/2018 6:13:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018 4:20:00 PM
Lab ID: 1805028-005 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	112	70-130		%Rec	1	5/4/2018 6:13:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**	
Arsenic	0.012	0.0010	*	mg/L	1	5/14/2018 5:46:34 PM	B51261
Lead	ND	0.00050		mg/L	1	5/14/2018 5:46:34 PM	B51261
Selenium	ND	0.0010		mg/L	1	5/14/2018 5:46:34 PM	B51261
Uranium	ND	0.00050		mg/L	1	5/14/2018 5:46:34 PM	B51261
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Fluoride	ND	0.50		mg/L	5	5/8/2018 12:46:43 PM	R51153
Chloride	99	10		mg/L	20	5/8/2018 12:59:34 PM	R51153
Bromide	0.52	0.50		mg/L	5	5/8/2018 12:46:43 PM	R51153
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	5/8/2018 12:46:43 PM	R51153
Sulfate	ND	2.5		mg/L	5	5/8/2018 12:46:43 PM	R51153
Nitrate+Nitrite as N	ND	1.0		mg/L	5	5/8/2018 2:55:19 PM	R51153
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**	
Barium	4.0	0.010	*	mg/L	5	5/17/2018 10:41:16 PM	A51355
Cadmium	ND	0.0020		mg/L	1	5/10/2018 3:13:55 PM	A51175
Calcium	83	1.0		mg/L	1	5/10/2018 3:13:55 PM	A51175
Chromium	ND	0.0060		mg/L	1	5/10/2018 3:13:55 PM	A51175
Copper	ND	0.0060		mg/L	1	5/10/2018 3:13:55 PM	A51175
Iron	5.5	0.20	*	mg/L	10	5/17/2018 10:43:42 PM	A51355
Magnesium	16	1.0		mg/L	1	5/10/2018 3:13:55 PM	A51175
Manganese	0.93	0.0020	*	mg/L	1	5/10/2018 3:13:55 PM	A51175
Potassium	ND	1.0		mg/L	1	5/15/2018 7:20:29 PM	A51298
Silver	ND	0.0050		mg/L	1	5/17/2018 10:39:15 PM	A51355
Sodium	310	5.0		mg/L	5	5/17/2018 10:41:16 PM	A51355
Zinc	ND	0.010		mg/L	1	5/10/2018 3:13:55 PM	A51175
EPA METHOD 200.7: TOTAL METALS						Analyst: **pmf**	
Barium	4.1	0.010	*	mg/L	5	5/18/2018 1:26:50 AM	37989
Cadmium	ND	0.0020		mg/L	1	5/10/2018 10:53:55 PM	37989
Chromium	ND	0.0060		mg/L	1	5/10/2018 10:53:55 PM	37989
Copper	ND	0.0060		mg/L	1	5/10/2018 5:29:12 PM	37989
Iron	5.8	0.20	*	mg/L	10	5/10/2018 10:57:53 PM	37989
Manganese	0.93	0.0020	*	mg/L	1	5/10/2018 5:29:12 PM	37989
Silver	ND	0.0050		mg/L	1	5/18/2018 1:24:52 AM	37989
Zinc	ND	0.010		mg/L	1	5/10/2018 5:29:12 PM	37989
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Arsenic	0.014	0.0010	*	mg/L	1	5/9/2018 10:34:48 AM	37989
Lead	ND	0.00050		mg/L	1	5/9/2018 10:34:48 AM	37989
Selenium	ND	0.0010		mg/L	1	5/9/2018 10:34:48 AM	37989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Uranium	ND	0.00050		mg/L	1	5/9/2018 10:34:48 AM	37989
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **TOM**	
Diesel Range Organics (DRO)	5.9	1.0		mg/L	1	5/3/2018 7:53:37 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/3/2018 7:53:37 PM	37932
Surr: DNOP	127	76.7-135		%Rec	1	5/3/2018 7:53:37 PM	37932
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	28	1.0		mg/L	20	5/5/2018 1:23:24 AM	G51049
Surr: BFB	116	69.3-150		%Rec	20	5/5/2018 1:23:24 AM	G51049
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Acenaphthylene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Aniline	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Anthracene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Azobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benz(a)anthracene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzo(a)pyrene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzo(b)fluoranthene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzo(g,h,i)perylene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzo(k)fluoranthene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzoic acid	41	20		µg/L	1	5/10/2018 2:39:12 PM	37947
Benzyl alcohol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Bis(2-chloroethyl)ether	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Bromophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Butyl benzyl phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Carbazole	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Chloro-3-methylphenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Chloroaniline	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Chloronaphthalene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Chlorophenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Chrysene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Di-n-butyl phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Di-n-octyl phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Dibenz(a,h)anthracene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Dibenzofuran	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
1,3-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
1,4-Dichlorobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
3,3´-Dichlorobenzidine	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Diethyl phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Dimethyl phthalate	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4-Dichlorophenol	ND	20		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4-Dimethylphenol	18	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4-Dinitrophenol	ND	20		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2,6-Dinitrotoluene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Fluoranthene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Fluorene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Hexachlorobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Hexachlorobutadiene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Hexachlorocyclopentadiene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Hexachloroethane	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Isophorone	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
1-Methylnaphthalene	76	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Methylnaphthalene	85	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Methylphenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
3+4-Methylphenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
N-Nitrosodimethylamine	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
N-Nitrosodiphenylamine	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Naphthalene	220	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
3-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Nitroaniline	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Nitrobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2-Nitrophenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
4-Nitrophenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Pentachlorophenol	ND	20		µg/L	1	5/10/2018 2:39:12 PM	37947
Phenanthrene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Phenol	23	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Pyrene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Pyridine	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4,5-Trichlorophenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
2,4,6-Trichlorophenol	ND	10		µg/L	1	5/10/2018 2:39:12 PM	37947
Surr: 2-Fluorophenol	41.4	15-114		%Rec	1	5/10/2018 2:39:12 PM	37947
Surr: Phenol-d5	39.2	15-97.9		%Rec	1	5/10/2018 2:39:12 PM	37947
Surr: 2,4,6-Tribromophenol	96.5	15-161		%Rec	1	5/10/2018 2:39:12 PM	37947
Surr: Nitrobenzene-d5	68.1	29.3-120		%Rec	1	5/10/2018 2:39:12 PM	37947
Surr: 2-Fluorobiphenyl	90.3	17.5-116		%Rec	1	5/10/2018 2:39:12 PM	37947
Surr: 4-Terphenyl-d14	74.8	21-92.2		%Rec	1	5/10/2018 2:39:12 PM	37947
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	9100	500		µg/L	500	5/7/2018 5:00:00 PM	R51091
Toluene	110	50		µg/L	50	5/7/2018 5:24:00 PM	R51091
Ethylbenzene	1300	50		µg/L	50	5/7/2018 5:24:00 PM	R51091
Methyl tert-butyl ether (MTBE)	35	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2,4-Trimethylbenzene	23	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,3,5-Trimethylbenzene	47	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Naphthalene	390	100		µg/L	50	5/7/2018 5:24:00 PM	R51091
1-Methylnaphthalene	100	100		µg/L	50	5/7/2018 5:24:00 PM	R51091
2-Methylnaphthalene	120	100		µg/L	50	5/7/2018 5:24:00 PM	R51091
Acetone	120	10		µg/L	1	5/4/2018 6:37:00 PM	R51047
Bromobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Bromodichloromethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Bromoform	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Bromomethane	ND	3.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
2-Butanone	41	10		µg/L	1	5/4/2018 6:37:00 PM	R51047
Carbon disulfide	ND	10		µg/L	1	5/4/2018 6:37:00 PM	R51047
Carbon Tetrachloride	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Chlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Chloroethane	ND	2.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Chloroform	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Chloromethane	ND	3.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
2-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
4-Chlorotoluene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
cis-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Dibromochloromethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Dibromomethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1-Dichloroethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1-Dichloroethene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,3-Dichloropropane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
2,2-Dichloropropane	ND	2.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Hexachlorobutadiene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
2-Hexanone	ND	10		µg/L	1	5/4/2018 6:37:00 PM	R51047
Isopropylbenzene	60	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
4-Isopropyltoluene	4.9	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
4-Methyl-2-pentanone	ND	10		µg/L	1	5/4/2018 6:37:00 PM	R51047
Methylene Chloride	ND	3.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
n-Butylbenzene	25	3.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
n-Propylbenzene	190	50		µg/L	50	5/7/2018 5:24:00 PM	R51091
sec-Butylbenzene	11	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Styrene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
tert-Butylbenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
trans-1,2-DCE	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Trichlorofluoromethane	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Vinyl chloride	ND	1.0		µg/L	1	5/4/2018 6:37:00 PM	R51047
Xylenes, Total	640	75		µg/L	50	5/7/2018 5:24:00 PM	R51091
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	5/4/2018 6:37:00 PM	R51047
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	5/4/2018 6:37:00 PM	R51047
Surr: Dibromofluoromethane	107	70-130		%Rec	1	5/4/2018 6:37:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date: 4/29/2018
Lab ID: 1805028-006
Matrix: AQUEOUS
Received Date: 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Surr: Toluene-d8	109	70-130		%Rec	1	5/4/2018 6:37:00 PM	R51047

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date:
Lab ID: 1805028-007 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/5/2018 1:46:45 AM	G51049
Surr: BFB	81.9	69.3-150		%Rec	1	5/5/2018 1:46:45 AM	G51049
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Toluene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Ethylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Naphthalene	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1-Methylnaphthalene	ND	4.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
2-Methylnaphthalene	ND	4.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Acetone	ND	10		µg/L	1	5/7/2018 5:48:00 PM	R51091
Bromobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Bromodichloromethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Bromoform	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Bromomethane	ND	3.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
2-Butanone	ND	10		µg/L	1	5/7/2018 5:48:00 PM	R51091
Carbon disulfide	ND	10		µg/L	1	5/7/2018 5:48:00 PM	R51091
Carbon Tetrachloride	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Chlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Chloroethane	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Chloroform	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Chloromethane	ND	3.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
2-Chlorotoluene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
4-Chlorotoluene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
cis-1,2-DCE	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Dibromochloromethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Dibromomethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1-Dichloroethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1-Dichloroethene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 GW Sampling OW
Collection Date:
Lab ID: 1805028-007 **Matrix:** AQUEOUS **Received Date:** 5/1/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,2-Dichloropropane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,3-Dichloropropane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
2,2-Dichloropropane	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Hexachlorobutadiene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
2-Hexanone	ND	10		µg/L	1	5/7/2018 5:48:00 PM	R51091
Isopropylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
4-Isopropyltoluene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
4-Methyl-2-pentanone	ND	10		µg/L	1	5/7/2018 5:48:00 PM	R51091
Methylene Chloride	ND	3.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
n-Butylbenzene	ND	3.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
n-Propylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
sec-Butylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Styrene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
tert-Butylbenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
trans-1,2-DCE	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Trichlorofluoromethane	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Vinyl chloride	ND	1.0		µg/L	1	5/7/2018 5:48:00 PM	R51091
Xylenes, Total	ND	1.5		µg/L	1	5/7/2018 5:48:00 PM	R51091
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	5/7/2018 5:48:00 PM	R51091
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	5/7/2018 5:48:00 PM	R51091
Surr: Dibromofluoromethane	118	70-130		%Rec	1	5/7/2018 5:48:00 PM	R51091
Surr: Toluene-d8	112	70-130		%Rec	1	5/7/2018 5:48:00 PM	R51091

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	55.5	50	150			
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	ND	1.0	0.5000	0	88.0	50	150			
Chromium	ND	0.0060	0.006000	0	69.7	50	150			
Copper	ND	0.0060	0.006000	0	83.0	50	150			
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	ND	1.0	0.5000	0	80.9	50	150			
Manganese	ND	0.0020	0.002000	0	93.5	50	150			
Silver	ND	0.0050	0.005000	0	77.6	50	150			
Sodium	ND	1.0	0.5000	0	100	50	150			
Zinc	ND	0.010	0.005000	0	95.6	50	150			

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	89.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.2	85	115			
Calcium	48	1.0	50.00	0	95.0	85	115			
Chromium	0.45	0.0060	0.5000	0	91.0	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51175**			RunNo: **51175**					
Prep Date:		Analysis Date: **5/10/2018**			SeqNo: **1663758**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	48	1.0	50.00	0	95.2	85	115			
Manganese	0.46	0.0020	0.5000	0	92.1	85	115			
Silver	0.091	0.0050	0.1000	0	91.1	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	**MB-C**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **C51175**			RunNo: **51175**					
Prep Date:		Analysis Date: **5/10/2018**			SeqNo: **1663858**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-C**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **C51175**			RunNo: **51175**					
Prep Date:		Analysis Date: **5/10/2018**			SeqNo: **1663859**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	102	50	150			

Sample ID	**LCS-C**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **C51175**			RunNo: **51175**					
Prep Date:		Analysis Date: **5/10/2018**			SeqNo: **1663860**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.2	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A51298**			RunNo: **51298**					
Prep Date:		Analysis Date: **5/15/2018**			SeqNo: **1667604**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51298**			RunNo: **51298**					
Prep Date:		Analysis Date: **5/15/2018**			SeqNo: **1667605**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0	0.5000	0	85.1	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51298**	RunNo: **51298**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667606** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	47	1.0	50.00	0	94.4	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51355**	RunNo: **51355**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1671230** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51355**	RunNo: **51355**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1671231** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	84.0	50	150			
Iron	ND	0.020	0.02000	0	96.6	50	150			
Potassium	ND	1.0	0.5000	0	99.1	50	150			
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Sodium	ND	1.0	0.5000	0	94.1	50	150			

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51355**	RunNo: **51355**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1671232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.11	0.0050	0.1000	0	109	85	115			
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **MB-37989**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **37989**	RunNo: **51175**
Prep Date: **5/8/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-37989**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **37989**	RunNo: **51175**
Prep Date: **5/8/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	89.0	50	150			
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Chromium	ND	0.0060	0.006000	0	57.2	50	150			
Copper	ND	0.0060	0.006000	0	87.5	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	ND	0.0050	0.005000	0	69.4	50	150			
Zinc	ND	0.010	0.005000	0	88.2	50	150			

Sample ID **LCS-37989**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **37989**	RunNo: **51175**
Prep Date: **5/8/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.53	0.0020	0.5000	0	106	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.53	0.0060	0.5000	0	106	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666235** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666236** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	97.6	50	150			
Lead	ND	0.00050	0.0005000	0	99.0	50	150			
Selenium	ND	0.0010	0.001000	0	95.4	50	150			
Uranium	ND	0.00050	0.0005000	0	98.3	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	96.3	85	115			

Sample ID **1805028-001EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB01**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666242** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	70	130			
Lead	0.012	0.00050	0.01250	0	95.5	70	130			
Selenium	0.023	0.0010	0.02500	0	92.8	70	130			
Uranium	0.012	0.00050	0.01250	0	95.2	70	130			

Sample ID **1805028-001EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB01**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID	**1805028-001EMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB01**	Batch ID:	**B51261**		RunNo:	**51261**				
Prep Date:		Analysis Date:	**5/14/2018**		SeqNo:	**1666245**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.3	70	130	0.0784	20	
Lead	0.012	0.00050	0.01250	0	96.2	70	130	0.813	20	
Selenium	0.023	0.0010	0.02500	0	92.9	70	130	0.0425	20	
Uranium	0.012	0.00050	0.01250	0	96.1	70	130	0.929	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**A51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669003**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669004**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050	0.0005000	0	94.2	50	150			

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669005**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID	**MB-37989**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**37989**	RunNo:	**51134**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/9/2018**	SeqNo:	**1661563**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-37989**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**37989**	RunNo:	**51134**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/9/2018**	SeqNo:	**1661564**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	ND	0.0010	0.001000	0	96.0	50	150			
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID	**MSLCS-37989**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**37989**	RunNo:	**51134**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/9/2018**	SeqNo:	**1661565**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.024	0.0010	0.02500	0	97.5	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51153**	RunNo: **51153**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661892** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51153**	RunNo: **51153**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661893** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.1	90	110			
Bromide	2.4	0.10	2.500	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.7	90	110			
Sulfate	9.1	0.50	10.00	0	91.0	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **LCS-37932**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.7	70	130			
Surr: DNOP	0.56		0.5000		112	76.7	135			

Sample ID **MB-37932**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656857** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		117	76.7	135			

Sample ID **1805028-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB01**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656987** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	82.8	143			
Surr: DNOP	0.54		0.5000		108	76.7	135			

Sample ID **1805028-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB01**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656988** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	111	82.8	143	7.02	20	
Surr: DNOP	0.55		0.5000		110	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658204** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	105	79.5	127			
Surr: BFB	21		20.00		106	69.3	150			

Sample ID **1805028-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-63**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	1.0	10.00	28.88	116	52.5	149			
Surr: BFB	530		400.0		132	69.3	150			

Sample ID **1805028-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-63**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/5/2018**	SeqNo: **1658212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	40	1.0	10.00	28.88	109	52.5	149	1.87	20	
Surr: BFB	510		400.0		128	69.3	150	0	0	

Sample ID **B29**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/5/2018**	SeqNo: **1658579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		87.9	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/5/2018**	SeqNo: **1658580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID	**2.5UG GRO LCS**	SampType: **LCS**		TestCode: **EPA Method 8015D: Gasoline Range**						
Client ID:	**LCSW**	Batch ID: **G51065**		RunNo: **51065**						
Prep Date:		Analysis Date: **5/5/2018**		SeqNo: **1658580**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.52	0.050	0.5000	0	105	79.5	127			
Surr: BFB		20		20.00		99.4	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1657986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	23	1.0	20.00	0	114	70	130			
Chlorobenzene	23	1.0	20.00	0	115	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51047**	RunNo: **51047**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658053** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		115	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659460** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	23	1.0	20.00	0	116	70	130			
Chlorobenzene	24	1.0	20.00	0	118	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	112	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51091**	RunNo: **51091**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659463** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **1805028-003cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-63** Batch ID: **37947** RunNo: **51189**

Prep Date: **5/4/2018** Analysis Date: **5/10/2018** SeqNo: **1663192** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	55	10	100.0	0	55.5	15	123			
4-Chloro-3-methylphenol	110	10	200.0	0	57.1	26.6	118			
2-Chlorophenol	97	10	200.0	0	48.6	15	120			
1,4-Dichlorobenzene	45	10	100.0	0	44.9	19	108			
2,4-Dinitrotoluene	61	10	100.0	0	61.2	27.8	103			
N-Nitrosodi-n-propylamine	57	10	100.0	0	56.5	32.3	126			
4-Nitrophenol	43	10	200.0	0	21.4	15	72.1			
Pentachlorophenol	110	20	200.0	0	56.3	15	114			
Phenol	71	10	200.0	17.14	26.7	15	67.5			
Pyrene	66	10	100.0	0	65.5	31.2	112			
1,2,4-Trichlorobenzene	47	10	100.0	0	46.7	22.1	123			
Surr: 2-Fluorophenol	62		200.0		31.0	15	114			
Surr: Phenol-d5	52		200.0		26.2	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		65.7	15	161			
Surr: Nitrobenzene-d5	51		100.0		51.4	29.3	120			
Surr: 2-Fluorobiphenyl	58		100.0		58.0	17.5	116			
Surr: 4-Terphenyl-d14	51		100.0		51.2	21	92.2			

Sample ID **1805028-003cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **OW-63** Batch ID: **37947** RunNo: **51189**

Prep Date: **5/4/2018** Analysis Date: **5/10/2018** SeqNo: **1663193** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.8	15	123	34.8	30.5	R
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	26.6	118	35.1	50	
2-Chlorophenol	120	10	200.0	0	61.2	15	120	22.9	36.3	
1,4-Dichlorobenzene	55	10	100.0	0	55.2	19	108	20.7	42.1	
2,4-Dinitrotoluene	85	10	100.0	0	84.5	27.8	103	32.0	28.5	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	32.3	126	20.9	25.4	
4-Nitrophenol	57	10	200.0	0	28.4	15	72.1	27.9	50	
Pentachlorophenol	150	20	200.0	0	76.1	15	114	29.8	50	
Phenol	92	10	200.0	17.14	37.2	15	67.5	25.9	46.1	
Pyrene	84	10	100.0	0	83.8	31.2	112	24.5	34.3	
1,2,4-Trichlorobenzene	63	10	100.0	0	63.2	22.1	123	30.0	43.6	
Surr: 2-Fluorophenol	73		200.0		36.3	15	114	0	0	
Surr: Phenol-d5	69		200.0		34.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	180		200.0		88.7	15	161	0	0	
Surr: Nitrobenzene-d5	66		100.0		65.6	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	83		100.0		82.9	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **1805028-003cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **OW-63**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663193** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	63		100.0		62.6	21	92.2	0	0	

Sample ID **lcs-37947**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663208** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	40.5	108			
2-Chlorophenol	150	10	200.0	0	74.3	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	68.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.2	35.6	91.4			
N-Nitrosodi-n-propylamine	81	10	100.0	0	81.4	41.6	114			
4-Nitrophenol	140	10	200.0	0	71.4	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	75.9	25.3	98.5			
Phenol	120	10	200.0	0	61.6	20.9	75.1			
Pyrene	78	10	100.0	0	78.5	45.6	108			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		67.5	15	114			
Surr: Phenol-d5	120		200.0		59.6	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.4	15	161			
Surr: Nitrobenzene-d5	75		100.0		75.4	29.3	120			
Surr: 2-Fluorobiphenyl	79		100.0		79.2	17.5	116			
Surr: 4-Terphenyl-d14	110		100.0		108	21	92.2			S

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805028**

31-May-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling OW

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.9	15	114			
Surr: Phenol-d5	62		200.0		31.2	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		90.8	15	161			
Surr: Nitrobenzene-d5	64		100.0		64.0	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	17.5	116			
Surr: 4-Terphenyl-d14	64		100.0		64.3	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805028 | RcptNo: 1

Received By: Isaiah Ortiz 5/1/2018 9:15:00 AM IO

Completed By: Anne Thorne 5/1/2018 12:49:26 PM Anne Thorne

Reviewed By: ENM 5/1/18

LB: IMO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 18
(<2 or >12 unless noted)
Adjusted? NO
Checked by: IMO

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	0.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (~~MKTF~~) OW**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/29/18	0925	H_2O	FB01	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	002											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	004												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	007													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/30/18	0700		Courier	5/1/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (~~MKTF~~ OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/29/18	0950	H_2O	EB01	40ml VOA-5	HCl	002			X							X						
				1 Liter Amber -1	Neat	002											X					
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	002												X				
				125 ml Plastic-1	HNO_3	002												X	X			
				125 ml Plastic-1	H_2SO_4	002													X			
				125 ml Plastic-1	Neat	002													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/30/18	0700		Courier	5/1/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
1/29/18	1030	H_2O	OW-63	40ml VOA-5	HCl	003			X							X						
				1 Liter Amber -2	Neat	003											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	003												X					
				125 ml Plastic-1	HNO_3	003												X	X				
				125 ml Plastic-1	H_2SO_4	003													X				
				125 ml Plastic-1	Neat	003													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/30/18	0700			5/1/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/29/18	1300	H_2O	OW-64	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -	Neat	002											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	004												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	007													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/30/18	0700		Courier		
				5/1/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/29/18	1620	H_2O	OW-62	40ml VOA-5	HCl	005			X							X						
				1 Liter Amber -	Neat	005											X					
				250 ml Amber-1	Neat	005			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	005													X			

Date:	Time:	Relinquished by:	Received by	Date	Time
4/30/18	0700			5/1/18	945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (~~MKTF~~)** OW

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805028	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/29/18	—	H_2O	DUP01	40ml VOA-5	HCl	006			X							X						
				1 Liter Amber -1	Neat	006											X					
				250 ml Amber-1	Neat	006			X													
				250 ml Plastic-1	HNO_3	006												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	006													X			
4/29/18	—	H_2O	TRIP BLANK	40 ml VOA-3	HCL											X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/30/18	0700			5/1/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 07, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling (API) OrderNo.: 1805106

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 11 sample(s) on 5/2/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 8:15:42 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:15:42 PM	37932
Surr: DNOP	142	0	76.7-135	S	%Rec	1	5/3/2018 8:15:42 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 2:10:06 AM	G51049
Surr: BFB	84.7	0	69.3-150		%Rec	1	5/5/2018 2:10:06 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 1:08:58 PM	R51220
Chloride	0.57	0.15	2.5	J	mg/L	5	5/11/2018 1:08:58 PM	R51220
Bromide	ND	0.13	0.50		mg/L	5	5/11/2018 1:08:58 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:08:58 PM	R51220
Sulfate	ND	1.0	2.5		mg/L	5	5/11/2018 1:08:58 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:24:32 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:10:38 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:10:38 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:10:38 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Manganese	0.00041	0.00039	0.0020	J	mg/L	1	5/18/2018 11:10:38 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:10:38 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:10:38 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:18:36 PM	B51452
Zinc	0.0068	0.0021	0.010	J	mg/L	1	5/18/2018 11:10:38 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/31/2018 8:36:14 PM	37927
Cadmium	0.00082	0.00058	0.0020	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:36:14 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:36:14 PM	37927
Iron	ND	0.010	0.020		mg/L	1	6/5/2018 2:38:06 PM	37927
Manganese	0.0015	0.0011	0.0020	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Silver	0.0033	0.0012	0.0050	J	mg/L	1	5/31/2018 8:36:14 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:36:14 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 2:53:56 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 2:53:56 PM	B51024
Selenium	ND	0.00076	0.0010		mg/L	1	5/3/2018 2:53:56 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/3/2018 2:53:56 PM	B51024
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:10:25 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:10:25 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:10:25 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:10:25 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:44:16 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,4-Trimethylbenzene	0.20	0.11	1.0	J	µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Acetone	3.6	0.82	10	J	µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 1:58:14 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 1:58:14 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 1:58:14 PM	W5119
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 9:20:00 AM
Lab ID: 1805106-001 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	5/10/2018 1:58:14 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 1:50:00 PM
Lab ID: 1805106-002
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.2	0.63	1.0		mg/L	1	5/3/2018 8:37:47 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:37:47 PM	37932
Surr: DNOP	119	0	76.7-135		%Rec	1	5/3/2018 8:37:47 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.1	0.42	1.0		mg/L	20	5/5/2018 2:33:26 AM	G51049
Surr: BFB	102	0	69.3-150		%Rec	20	5/5/2018 2:33:26 AM	G51049
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.38	0.00099	0.0020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Chromium	0.020	0.0013	0.0060		mg/L	1	5/18/2018 11:12:48 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:12:48 AM	A51375
Iron	0.080	0.016	0.020		mg/L	1	5/18/2018 11:12:48 AM	A51375
Manganese	0.11	0.00039	0.0020	*	mg/L	1	5/18/2018 11:12:48 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:12:48 AM	A51375
Zinc	0.010	0.0021	0.010		mg/L	1	5/18/2018 11:12:48 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.38	0.0010	0.0020		mg/L	1	5/31/2018 8:38:25 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:38:25 PM	37927
Chromium	0.050	0.0018	0.0060		mg/L	1	5/31/2018 8:38:25 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:38:25 PM	37927
Iron	0.20	0.010	0.020		mg/L	1	6/5/2018 2:40:16 PM	37927
Manganese	0.11	0.0011	0.0020	*	mg/L	1	5/31/2018 8:38:25 PM	37927
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/31/2018 8:38:25 PM	37927
Zinc	0.020	0.0033	0.010		mg/L	1	5/31/2018 8:38:25 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 2:56:14 PM	B51024
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 2:56:14 PM	B51024
Selenium	0.0024	0.00076	0.0010		mg/L	1	5/3/2018 2:56:14 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/3/2018 2:56:14 PM	B51024
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:17:17 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:17:17 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:17:17 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:17:17 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:46:35 PM	37992

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EAST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 1:50:00 PM
Lab ID: 1805106-002
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	710	0.62	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Toluene	37	0.64	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Ethylbenzene	260	0.93	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
1,2,4-Trimethylbenzene	160	1.1	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
1,3,5-Trimethylbenzene	150	0.87	10		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Xylenes, Total	600	3.2	15		µg/L	10	5/11/2018 6:51:00 PM	SL5124
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: Dibromofluoromethane	110	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/11/2018 6:51:00 PM	SL5124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:15:00 PM
Lab ID: 1805106-003
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	9.4	0.63	1.0		mg/L	1	5/3/2018 8:59:47 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 8:59:47 PM	37932
Surr: DNOP	116	0	76.7-135		%Rec	1	5/3/2018 8:59:47 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.8	0.42	1.0		mg/L	20	5/5/2018 2:56:45 AM	G51049
Surr: BFB	88.0	0	69.3-150		%Rec	20	5/5/2018 2:56:45 AM	G51049
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.092	0.00099	0.0020		mg/L	1	5/18/2018 11:14:57 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:14:57 AM	A51375
Chromium	0.68	0.0013	0.0060	*	mg/L	1	5/18/2018 11:14:57 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:14:57 AM	A51375
Iron	0.31	0.016	0.020	*	mg/L	1	5/18/2018 11:14:57 AM	A51375
Manganese	1.7	0.0020	0.010	*	mg/L	5	5/18/2018 1:03:35 PM	A51375
Silver	0.0047	0.0018	0.0050	J	mg/L	1	5/18/2018 11:14:57 AM	A51375
Zinc	0.040	0.0021	0.010		mg/L	1	5/18/2018 11:14:57 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.094	0.0010	0.0020		mg/L	1	5/31/2018 8:40:41 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:40:41 PM	37927
Chromium	0.66	0.0018	0.0060	*	mg/L	1	5/31/2018 8:40:41 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:40:41 PM	37927
Iron	0.92	0.010	0.020	*	mg/L	1	6/5/2018 2:42:26 PM	37927
Manganese	1.4	0.0055	0.010	*	mg/L	5	6/5/2018 2:44:25 PM	37927
Silver	0.0074	0.0012	0.0050		mg/L	1	5/31/2018 8:40:41 PM	37927
Zinc	0.065	0.0033	0.010		mg/L	1	5/31/2018 8:40:41 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0050	0.0021	0.0050	J	mg/L	5	5/14/2018 5:49:35 PM	B51261
Lead	ND	0.00087	0.0025		mg/L	5	5/14/2018 5:49:35 PM	B51261
Selenium	0.0075	0.0038	0.0050		mg/L	5	5/14/2018 5:49:35 PM	B51261
Uranium	0.00058	0.00048	0.0025	J	mg/L	5	5/14/2018 5:49:35 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0051	0.0021	0.0050		mg/L	5	5/8/2018 12:19:33 PM	37927
Lead	ND	0.0011	0.0025		mg/L	5	5/8/2018 12:19:33 PM	37927
Selenium	ND	0.0049	0.0050		mg/L	5	5/8/2018 12:19:33 PM	37927
Uranium	0.00069	0.00034	0.0025	J	mg/L	5	5/8/2018 12:19:33 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000097	0.000037	0.00020	J	mg/L	1	5/8/2018 5:48:46 PM	37992

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: WEST LDU
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:15:00 PM
Lab ID: 1805106-003
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260: VOLATILES SHORT LIST							Analyst: **RAA**	
Benzene	2700	6.2	100		µg/L	100	5/11/2018 7:15:00 PM	SL5124
Toluene	16	0.64	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Ethylbenzene	72	0.93	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Methyl tert-butyl ether (MTBE)	ND	2.4	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
1,2,4-Trimethylbenzene	1.8	1.1	10	J	µg/L	10	5/11/2018 7:39:00 PM	SL5124
1,3,5-Trimethylbenzene	ND	0.87	10		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Xylenes, Total	35	3.2	15		µg/L	10	5/11/2018 7:39:00 PM	SL5124
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: Dibromofluoromethane	106	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/11/2018 7:39:00 PM	SL5124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 9:21:55 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 9:21:55 PM	37932
Surr: DNOP	117	0	76.7-135		%Rec	1	5/3/2018 9:21:55 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 3:19:53 AM	G51049
Surr: BFB	89.0	0	69.3-150		%Rec	1	5/5/2018 3:19:53 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 1:33:48 PM	R51220
Chloride	0.56	0.15	2.5	J	mg/L	5	5/11/2018 1:33:48 PM	R51220
Bromide	ND	0.13	0.50		mg/L	5	5/11/2018 1:33:48 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:33:48 PM	R51220
Sulfate	ND	1.0	2.5		mg/L	5	5/11/2018 1:33:48 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:36:56 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:17:16 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:17:16 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:17:16 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:17:16 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:17:16 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:20:44 PM	B51452
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/18/2018 11:17:16 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:42:43 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:42:43 PM	37927
Iron	ND	0.010	0.020		mg/L	1	6/5/2018 2:46:38 PM	37927
Manganese	ND	0.0011	0.0020		mg/L	1	5/31/2018 8:42:43 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 8:42:43 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:42:43 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/3/2018 3:05:30 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:05:30 PM	B51024
Selenium	0.0060	0.00076	0.0010		mg/L	1	5/3/2018 3:05:30 PM	B51024
Uranium	ND	0.000096	0.00050		mg/L	1	5/14/2018 5:55:38 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/8/2018 12:21:50 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:21:50 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:21:50 PM	37927
Uranium	ND	0.000068	0.00050		mg/L	1	5/8/2018 12:21:50 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:50:58 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Toluene	0.078	0.064	1.0	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,4-Trimethylbenzene	0.16	0.11	1.0	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Acetone	1.4	0.82	10	J	µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 2:27:40 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 2:27:40 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 2:27:40 PM	W5119
Surr: 1,2-Dichloroethane-d4	92.9	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 2:30:00 PM
Lab ID: 1805106-004
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	5/10/2018 2:27:40 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.9	0.63	1.0		mg/L	1	5/3/2018 9:43:51 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 9:43:51 PM	37932
Surr: DNOP	115	0	76.7-135		%Rec	1	5/3/2018 9:43:51 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.59	0.021	0.050		mg/L	1	5/5/2018 3:43:01 AM	G51049
Surr: BFB	180	0	69.3-150	S	%Rec	1	5/5/2018 3:43:01 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.6	0.15	0.50		mg/L	5	5/11/2018 1:58:37 PM	R51220
Chloride	220	0.59	10		mg/L	20	5/11/2018 2:11:02 PM	R51220
Bromide	1.0	0.13	0.50		mg/L	5	5/11/2018 1:58:37 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 1:58:37 PM	R51220
Sulfate	3.6	1.0	2.5		mg/L	5	5/11/2018 1:58:37 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:49:20 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.6	0.0049	0.010		mg/L	5	5/18/2018 1:05:45 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:25:48 AM	A51375
Calcium	66	0.078	1.0		mg/L	1	5/18/2018 11:25:48 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:25:48 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:25:48 AM	A51375
Iron	1.8	0.082	0.10	*	mg/L	5	5/18/2018 1:05:45 PM	A51375
Magnesium	13	0.25	1.0		mg/L	1	5/18/2018 11:25:48 AM	A51375
Manganese	0.91	0.00039	0.0020	*	mg/L	1	5/18/2018 11:25:48 AM	A51375
Potassium	0.27	0.11	1.0	J	mg/L	1	5/18/2018 11:25:48 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:25:48 AM	A51375
Sodium	360	0.82	5.0		mg/L	5	5/23/2018 2:22:51 PM	B51452
Zinc	0.0054	0.0021	0.010	J	mg/L	1	5/18/2018 11:25:48 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	6/5/2018 2:48:50 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:44:53 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:44:53 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:44:53 PM	37927
Iron	3.7	0.051	0.10	*	mg/L	5	6/5/2018 2:48:50 PM	37927
Manganese	0.94	0.0011	0.0020	*	mg/L	1	5/31/2018 8:44:53 PM	37927
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/31/2018 8:44:53 PM	37927
Zinc	0.0064	0.0033	0.010	J	mg/L	1	5/31/2018 8:44:53 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0045	0.00042	0.0010		mg/L	1	5/3/2018 3:07:49 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:07:49 PM	B51024
Selenium	0.0049	0.00076	0.0010		mg/L	1	5/3/2018 3:07:49 PM	B51024
Uranium	0.00016	0.000096	0.00050	J	mg/L	1	5/14/2018 5:58:39 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0047	0.00041	0.0010		mg/L	1	5/8/2018 12:24:06 PM	37927
Lead	0.0012	0.00023	0.00050		mg/L	1	5/8/2018 12:24:06 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:24:06 PM	37927
Uranium	0.00029	0.000068	0.00050	J	mg/L	1	5/8/2018 12:24:06 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:53:11 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	32	0.062	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Toluene	2.3	0.064	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Ethylbenzene	35	0.093	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Methyl tert-butyl ether (MTBE)	99	0.24	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,4-Trimethylbenzene	0.84	0.11	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3,5-Trimethylbenzene	0.20	0.087	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Naphthalene	7.8	0.11	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1-Methylnaphthalene	11	0.16	4.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Methylnaphthalene	1.7	0.15	4.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Acetone	9.7	0.82	10	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloroethane	0.52	0.40	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Isopropylbenzene	3.7	0.051	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 3:26:39 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
n-Butylbenzene	0.59	0.13	3.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
n-Propylbenzene	3.7	0.074	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
sec-Butylbenzene	1.2	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
tert-Butylbenzene	0.25	0.10	1.0	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 3:26:39 PM	W5119
Xylenes, Total	0.61	0.32	1.5	J	µg/L	1	5/10/2018 3:26:39 PM	W5119
Surr: 1,2-Dichloroethane-d4	94.4	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:10:00 PM
Lab ID: 1805106-005 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119
Surr: Dibromofluoromethane	94.6	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119
Surr: Toluene-d8	96.5	0	70-130		%Rec	1	5/10/2018 3:26:39 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.65	0.63	1.0	J	mg/L	1	5/3/2018 10:06:04 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:06:04 PM	37932
Surr: DNOP	117	0	76.7-135		%Rec	1	5/3/2018 10:06:04 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.9	0.021	0.050		mg/L	1	5/5/2018 4:29:42 AM	G51049
Surr: BFB	167	0	69.3-150	S	%Rec	1	5/5/2018 4:29:42 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.79	0.15	0.50		mg/L	5	5/11/2018 2:48:16 PM	R51220
Chloride	170	0.59	10		mg/L	20	5/11/2018 3:00:40 PM	R51220
Bromide	1.4	0.13	0.50		mg/L	5	5/11/2018 2:48:16 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 2:48:16 PM	R51220
Sulfate	18	1.0	2.5		mg/L	5	5/11/2018 2:48:16 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:01:44 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.2	0.0049	0.010		mg/L	5	5/18/2018 1:07:56 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:27:49 AM	A51375
Calcium	83	0.078	1.0		mg/L	1	5/18/2018 11:27:49 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:27:49 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:27:49 AM	A51375
Iron	0.046	0.016	0.020		mg/L	1	5/18/2018 11:27:49 AM	A51375
Magnesium	13	0.25	1.0		mg/L	1	5/18/2018 11:27:49 AM	A51375
Manganese	1.2	0.0020	0.010	*	mg/L	5	5/18/2018 1:07:56 PM	A51375
Potassium	0.36	0.11	1.0	J	mg/L	1	5/18/2018 11:27:49 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:27:49 AM	A51375
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 2:25:04 PM	B51452
Zinc	0.0070	0.0021	0.010	J	mg/L	1	5/18/2018 11:27:49 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.3	0.0050	0.010		mg/L	5	5/31/2018 9:03:46 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:53:23 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:53:23 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:53:23 PM	37927
Iron	0.23	0.010	0.020		mg/L	1	6/5/2018 2:51:05 PM	37927
Manganese	1.2	0.0055	0.010	*	mg/L	5	5/31/2018 9:03:46 PM	37927
Silver	0.0019	0.0012	0.0050	J	mg/L	1	5/31/2018 8:53:23 PM	37927
Zinc	ND	0.0033	0.010		mg/L	1	5/31/2018 8:53:23 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	5/3/2018 3:10:07 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:10:07 PM	B51024
Selenium	0.0036	0.00076	0.0010		mg/L	1	5/3/2018 3:10:07 PM	B51024
Uranium	0.0086	0.000096	0.00050		mg/L	1	5/14/2018 6:07:46 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0025	0.00041	0.0010		mg/L	1	5/8/2018 12:26:23 PM	37927
Lead	0.00054	0.00023	0.00050		mg/L	1	5/8/2018 12:26:23 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:26:23 PM	37927
Uranium	0.0089	0.000068	0.00050		mg/L	1	5/8/2018 12:26:23 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 5:55:24 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	590	0.62	10		µg/L	10	5/11/2018 8:03:00 PM	R51242
Toluene	510	0.64	10		µg/L	10	5/11/2018 8:03:00 PM	R51242
Ethylbenzene	54	0.093	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Methyl tert-butyl ether (MTBE)	32	0.24	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,4-Trimethylbenzene	11	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3,5-Trimethylbenzene	3.1	0.087	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Naphthalene	8.2	0.11	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1-Methylnaphthalene	3.5	0.16	4.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Methylnaphthalene	1.3	0.15	4.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Acetone	5.9	0.82	10	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Isopropylbenzene	4.4	0.051	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Isopropyltoluene	0.14	0.096	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 3:56:09 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
n-Butylbenzene	0.30	0.13	3.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
n-Propylbenzene	3.2	0.074	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
sec-Butylbenzene	0.49	0.11	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
tert-Butylbenzene	0.16	0.10	1.0	J	µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 3:56:09 PM	W5119
Xylenes, Total	58	0.32	1.5		µg/L	1	5/10/2018 3:56:09 PM	W5119
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: KA-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 3:40:00 PM
Lab ID: 1805106-006
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119
Surr: Dibromofluoromethane	97.4	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	5/10/2018 3:56:09 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 10:28:03 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:28:03 PM	37932
Surr: DNOP	113	0	76.7-135		%Rec	1	5/3/2018 10:28:03 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.80	0.021	0.050		mg/L	1	5/5/2018 4:53:02 AM	G51049
Surr: BFB	114	0	69.3-150		%Rec	1	5/5/2018 4:53:02 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.62	0.15	0.50		mg/L	5	5/11/2018 3:13:04 PM	R51220
Chloride	190	0.59	10		mg/L	20	5/11/2018 3:25:29 PM	R51220
Bromide	1.4	0.13	0.50		mg/L	5	5/11/2018 3:13:04 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 3:13:04 PM	R51220
Sulfate	47	1.0	2.5		mg/L	5	5/11/2018 3:13:04 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:14:09 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.093	0.00099	0.0020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Calcium	14	0.078	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:29:56 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:29:56 AM	A51375
Iron	0.040	0.016	0.020		mg/L	1	5/18/2018 11:29:56 AM	A51375
Magnesium	2.6	0.25	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Manganese	0.14	0.00039	0.0020	*	mg/L	1	5/18/2018 11:29:56 AM	A51375
Potassium	1.6	0.11	1.0		mg/L	1	5/18/2018 11:29:56 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:29:56 AM	A51375
Sodium	500	0.82	5.0		mg/L	5	5/23/2018 2:33:35 PM	B51452
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/18/2018 11:29:56 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.090	0.0010	0.0020		mg/L	1	5/31/2018 8:55:37 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:55:37 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 8:55:37 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:55:37 PM	37927
Iron	0.074	0.010	0.020		mg/L	1	6/5/2018 2:53:15 PM	37927
Manganese	0.15	0.0011	0.0020	*	mg/L	1	5/31/2018 8:55:37 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 8:55:37 PM	37927
Zinc	0.0053	0.0033	0.010	J	mg/L	1	5/31/2018 8:55:37 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	5/3/2018 3:12:25 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:12:25 PM	B51024
Selenium	0.0029	0.00076	0.0010		mg/L	1	5/3/2018 3:12:25 PM	B51024
Uranium	0.022	0.000096	0.00050		mg/L	1	5/14/2018 6:10:47 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	5/8/2018 12:28:39 PM	37927
Lead	ND	0.00023	0.00050		mg/L	1	5/8/2018 12:28:39 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:28:39 PM	37927
Uranium	0.023	0.000068	0.00050		mg/L	1	5/8/2018 12:28:39 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:02:15 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	290	0.62	10		µg/L	10	5/11/2018 8:27:00 PM	R51242
Toluene	6.6	0.064	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Ethylbenzene	8.3	0.093	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Methyl tert-butyl ether (MTBE)	32	0.24	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,4-Trimethylbenzene	1.9	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3,5-Trimethylbenzene	0.68	0.087	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Naphthalene	0.46	0.11	2.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
1-Methylnaphthalene	0.51	0.16	4.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Acetone	3.2	0.82	10	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Isopropylbenzene	0.78	0.051	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 4:25:37 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
n-Propylbenzene	0.37	0.074	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
sec-Butylbenzene	0.21	0.11	1.0	J	µg/L	1	5/10/2018 4:25:37 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 4:25:37 PM	W5119
Xylenes, Total	13	0.32	1.5		µg/L	1	5/10/2018 4:25:37 PM	W5119
Surr: 1,2-Dichloroethane-d4	92.2	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: NAPIS-3
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:05:00 PM
Lab ID: 1805106-007
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119
Surr: Dibromofluoromethane	96.5	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	5/10/2018 4:25:37 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.9	0.63	1.0		mg/L	1	5/3/2018 10:50:06 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 10:50:06 PM	37932
Surr: DNOP	118	0	76.7-135		%Rec	1	5/3/2018 10:50:06 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.46	0.021	0.050		mg/L	1	5/5/2018 5:16:25 AM	G51049
Surr: BFB	183	0	69.3-150	S	%Rec	1	5/5/2018 5:16:25 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.4	0.15	0.50		mg/L	5	5/11/2018 3:37:53 PM	R51220
Chloride	1500	5.9	100		mg/L	200	5/14/2018 5:16:13 PM	R51270
Bromide	4.2	0.13	0.50		mg/L	5	5/11/2018 3:37:53 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 3:37:53 PM	R51220
Sulfate	12	1.0	2.5		mg/L	5	5/11/2018 3:37:53 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:26:34 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.93	0.00099	0.0020		mg/L	1	5/18/2018 11:32:03 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:32:03 AM	A51375
Calcium	150	0.39	5.0		mg/L	5	5/18/2018 1:18:33 PM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:32:03 AM	A51375
Copper	0.0038	0.0032	0.0060	J	mg/L	1	5/18/2018 11:32:03 AM	A51375
Iron	0.98	0.082	0.10	*	mg/L	5	5/18/2018 1:18:33 PM	A51375
Magnesium	30	0.25	1.0		mg/L	1	5/18/2018 11:32:03 AM	A51375
Manganese	1.1	0.0020	0.010	*	mg/L	5	5/18/2018 1:18:33 PM	A51375
Potassium	3.7	0.11	1.0		mg/L	1	5/18/2018 11:32:03 AM	A51375
Silver	0.0020	0.0018	0.0050	J	mg/L	1	5/18/2018 11:32:03 AM	A51375
Sodium	1200	3.3	20		mg/L	20	5/22/2018 9:45:56 PM	A51451
Zinc	0.019	0.0021	0.010		mg/L	1	5/18/2018 11:32:03 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.2	0.0050	0.010		mg/L	5	5/31/2018 9:05:47 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:57:45 PM	37927
Chromium	0.0086	0.0018	0.0060		mg/L	1	5/31/2018 8:57:45 PM	37927
Copper	0.034	0.0041	0.0060		mg/L	1	5/31/2018 8:57:45 PM	37927
Iron	7.5	0.10	0.20	*	mg/L	10	6/5/2018 2:55:20 PM	37927
Manganese	1.3	0.0055	0.010	*	mg/L	5	5/31/2018 9:05:47 PM	37927
Silver	0.0026	0.0012	0.0050	J	mg/L	1	5/31/2018 8:57:45 PM	37927
Zinc	0.053	0.0033	0.010		mg/L	1	5/31/2018 8:57:45 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0091	0.0021	0.0050		mg/L	5	5/16/2018 3:11:06 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008 **Matrix:** AQUEOUS **Received Date:** 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.0043	0.00087	0.0025		mg/L	5	5/16/2018 3:11:06 PM	A51316
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:11:06 PM	A51316
Uranium	0.047	0.00048	0.0025	*	mg/L	5	5/16/2018 3:11:06 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.011	0.0021	0.0050	*	mg/L	5	5/8/2018 12:30:56 PM	37927
Lead	0.013	0.0011	0.0025		mg/L	5	5/8/2018 12:30:56 PM	37927
Selenium	ND	0.0049	0.0050		mg/L	5	5/8/2018 12:30:56 PM	37927
Uranium	0.046	0.00034	0.0025	*	mg/L	5	5/8/2018 12:30:56 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:04:28 PM	37992
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Acenaphthylene	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Aniline	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Anthracene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Azobenzene	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benz(a)anthracene	ND	26	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(a)pyrene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(b)fluoranthene	ND	36	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(g,h,i)perylene	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzo(k)fluoranthene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzoic acid	92	32	100	JD	µg/L	1	5/10/2018 3:07:21 PM	37947
Benzyl alcohol	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroethoxy)methane	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroethyl)ether	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-chloroisopropyl)ether	ND	24	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Bis(2-ethylhexyl)phthalate	ND	40	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Bromophenyl phenyl ether	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Butyl benzyl phthalate	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Carbazole	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chloro-3-methylphenol	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chloroaniline	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Chloronaphthalene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Chlorophenol	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Chlorophenyl phenyl ether	ND	36	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Chrysene	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Di-n-butyl phthalate	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Di-n-octyl phthalate	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Dibenzofuran	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,2-Dichlorobenzene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,3-Dichlorobenzene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,4-Dichlorobenzene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3,3´-Dichlorobenzidine	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Diethyl phthalate	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Dimethyl phthalate	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dichlorophenol	ND	29	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dimethylphenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4,6-Dinitro-2-methylphenol	ND	27	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dinitrophenol	ND	19	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4-Dinitrotoluene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,6-Dinitrotoluene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Fluoranthene	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Fluorene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorobenzene	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorobutadiene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachlorocyclopentadiene	ND	20	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Hexachloroethane	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Indeno(1,2,3-cd)pyrene	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Isophorone	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1-Methylnaphthalene	ND	35	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Methylnaphthalene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Methylphenol	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3+4-Methylphenol	ND	27	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodi-n-propylamine	ND	31	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodimethylamine	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
N-Nitrosodiphenylamine	ND	33	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Naphthalene	ND	25	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Nitroaniline	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
3-Nitroaniline	ND	34	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Nitroaniline	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Nitrobenzene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2-Nitrophenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
4-Nitrophenol	ND	28	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Pentachlorophenol	ND	26	100	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Phenanthrene	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Phenol	ND	30	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	33	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Pyridine	ND	27	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
1,2,4-Trichlorobenzene	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4,5-Trichlorophenol	ND	29	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
2,4,6-Trichlorophenol	ND	32	50	D	µg/L	1	5/10/2018 3:07:21 PM	37947
Surr: 2-Fluorophenol	40.5	0	15-114	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: Phenol-d5	32.7	0	15-97.9	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 2,4,6-Tribromophenol	88.4	0	15-161	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: Nitrobenzene-d5	64.3	0	29.3-120	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 2-Fluorobiphenyl	82.1	0	17.5-116	D	%Rec	1	5/10/2018 3:07:21 PM	37947
Surr: 4-Terphenyl-d14	66.2	0	21-92.2	D	%Rec	1	5/10/2018 3:07:21 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	68	0.062	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Toluene	0.66	0.064	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Ethylbenzene	6.3	0.093	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Methyl tert-butyl ether (MTBE)	260	2.4	10		µg/L	10	5/14/2018 4:08:00 PM	R51274
1,2,4-Trimethylbenzene	1.6	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Naphthalene	0.74	0.11	2.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
1-Methylnaphthalene	4.7	0.16	4.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Methylnaphthalene	0.36	0.15	4.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Acetone	56	0.82	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Butanone	4.4	1.1	10	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloroethane	1.1	0.40	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Isopropylbenzene	0.73	0.051	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Isopropyltoluene	0.33	0.096	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 8:51:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
n-Butylbenzene	0.21	0.13	3.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
n-Propylbenzene	0.76	0.074	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
sec-Butylbenzene	0.18	0.11	1.0	J	µg/L	1	5/11/2018 8:51:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 8:51:00 PM	R51242
Xylenes, Total	3.2	0.32	1.5		µg/L	1	5/11/2018 8:51:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 4:50:00 PM
Lab ID: 1805106-008
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/11/2018 8:51:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/3/2018 11:12:16 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 11:12:16 PM	37932
Surr: DNOP	121	0	76.7-135		%Rec	1	5/3/2018 11:12:16 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 7:36:35 AM	G51049
Surr: BFB	90.1	0	69.3-150		%Rec	1	5/5/2018 7:36:35 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 4:02:42 PM	R51220
Chloride	2100	5.9	100		mg/L	200	5/21/2018 11:57:28 AM	R51421
Bromide	3.6	0.13	0.50		mg/L	5	5/11/2018 4:02:42 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 4:02:42 PM	R51220
Sulfate	150	1.0	2.5		mg/L	5	5/11/2018 4:02:42 PM	R51220
Nitrate+Nitrite as N	24	0.55	2.0	*	mg/L	10	5/21/2018 12:34:41 PM	R51421
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.10	0.00099	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Calcium	73	0.078	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:34:15 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:34:15 AM	A51375
Iron	0.032	0.016	0.020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Magnesium	10	0.25	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:34:15 AM	A51375
Potassium	4.6	0.11	1.0		mg/L	1	5/18/2018 11:34:15 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:34:15 AM	A51375
Sodium	1400	3.3	20		mg/L	20	5/24/2018 7:55:47 PM	A51516
Zinc	0.0066	0.0021	0.010	J	mg/L	1	5/18/2018 11:34:15 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Chromium	0.0030	0.0018	0.0060	J	mg/L	1	5/31/2018 8:59:46 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 8:59:46 PM	37927
Iron	0.51	0.010	0.020	*	mg/L	1	6/5/2018 2:57:30 PM	37927
Manganese	0.0087	0.0011	0.0020		mg/L	1	5/31/2018 8:59:46 PM	37927
Silver	0.0018	0.0012	0.0050	J	mg/L	1	5/31/2018 8:59:46 PM	37927
Zinc	0.0084	0.0033	0.010	J	mg/L	1	5/31/2018 8:59:46 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0031	0.0021	0.0050	J	mg/L	5	5/3/2018 3:46:33 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00087	0.0025		mg/L	5	5/3/2018 3:46:33 PM	B51024
Selenium	0.0065	0.0038	0.0050		mg/L	5	5/16/2018 3:13:29 PM	A51316
Uranium	0.030	0.00048	0.0025	*	mg/L	5	5/16/2018 3:13:29 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0035	0.0021	0.0050	J	mg/L	5	5/8/2018 12:43:57 PM	37927
Lead	ND	0.0011	0.0025		mg/L	5	5/8/2018 12:43:57 PM	37927
Selenium	0.0063	0.0049	0.0050		mg/L	5	5/8/2018 12:43:57 PM	37927
Uranium	0.029	0.00034	0.0025		mg/L	5	5/8/2018 12:43:57 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:06:42 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Toluene	0.32	0.064	1.0	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,4-Trimethylbenzene	0.17	0.11	1.0	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 9:15:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 9:15:00 PM	R51242
Xylenes, Total	0.54	0.32	1.5	J	µg/L	1	5/11/2018 9:15:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018 5:20:00 PM
Lab ID: 1805106-009
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/11/2018 9:15:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.8	0.63	1.0		mg/L	1	5/3/2018 11:34:22 PM	37932
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/3/2018 11:34:22 PM	37932
Surr: DNOP	121	0	76.7-135		%Rec	1	5/3/2018 11:34:22 PM	37932
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.61	0.021	0.050		mg/L	1	5/5/2018 7:59:53 AM	G51049
Surr: BFB	182	0	69.3-150	S	%Rec	1	5/5/2018 7:59:53 AM	G51049
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.6	0.15	0.50		mg/L	5	5/11/2018 4:27:31 PM	R51220
Chloride	210	0.59	10		mg/L	20	5/11/2018 4:39:55 PM	R51220
Bromide	1.0	0.13	0.50		mg/L	5	5/11/2018 4:27:31 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/11/2018 4:27:31 PM	R51220
Sulfate	3.9	1.0	2.5		mg/L	5	5/11/2018 4:27:31 PM	R51220
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 4:51:23 PM	R51270
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.6	0.0049	0.010		mg/L	5	5/18/2018 1:22:52 PM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:36:30 AM	A51375
Calcium	66	0.078	1.0		mg/L	1	5/18/2018 11:36:30 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:36:30 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:36:30 AM	A51375
Iron	1.7	0.082	0.10	*	mg/L	5	5/18/2018 1:22:52 PM	A51375
Magnesium	12	0.25	1.0		mg/L	1	5/18/2018 11:36:30 AM	A51375
Manganese	0.92	0.00039	0.0020	*	mg/L	1	5/18/2018 11:36:30 AM	A51375
Potassium	0.25	0.11	1.0	J	mg/L	1	5/18/2018 11:36:30 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:36:30 AM	A51375
Sodium	340	0.82	5.0		mg/L	5	5/23/2018 2:37:39 PM	C51452
Zinc	0.0056	0.0021	0.010	J	mg/L	1	5/18/2018 11:36:30 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.8	0.0050	0.010		mg/L	5	6/5/2018 3:06:07 PM	37927
Cadmium	ND	0.00058	0.0020		mg/L	1	5/31/2018 9:01:47 PM	37927
Chromium	ND	0.0018	0.0060		mg/L	1	5/31/2018 9:01:47 PM	37927
Copper	ND	0.0041	0.0060		mg/L	1	5/31/2018 9:01:47 PM	37927
Iron	3.1	0.051	0.10	*	mg/L	5	6/5/2018 3:06:07 PM	37927
Manganese	0.95	0.0011	0.0020	*	mg/L	1	5/31/2018 9:01:47 PM	37927
Silver	ND	0.0012	0.0050		mg/L	1	5/31/2018 9:01:47 PM	37927
Zinc	0.0034	0.0033	0.010	J	mg/L	1	5/31/2018 9:01:47 PM	37927
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0043	0.00042	0.0010		mg/L	1	5/3/2018 3:39:38 PM	B51024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/3/2018 3:39:38 PM	B51024
Selenium	0.0016	0.00076	0.0010		mg/L	1	5/3/2018 3:39:38 PM	B51024
Uranium	0.00016	0.000096	0.00050	J	mg/L	1	5/14/2018 6:19:50 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0046	0.00041	0.0010		mg/L	1	5/8/2018 12:35:29 PM	37927
Lead	0.00078	0.00023	0.00050		mg/L	1	5/8/2018 12:35:29 PM	37927
Selenium	ND	0.00098	0.0010		mg/L	1	5/8/2018 12:35:29 PM	37927
Uranium	0.00023	0.000068	0.00050	J	mg/L	1	5/8/2018 12:35:29 PM	37927
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/8/2018 6:08:57 PM	37992
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	38	0.062	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Toluene	2.8	0.064	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Ethylbenzene	46	0.093	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Methyl tert-butyl ether (MTBE)	110	0.24	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,4-Trimethylbenzene	0.88	0.11	1.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Naphthalene	8.4	0.11	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1-Methylnaphthalene	13	0.16	4.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Methylnaphthalene	2.4	0.15	4.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
Acetone	17	0.82	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Isopropylbenzene	4.5	0.051	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 9:39:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
n-Butylbenzene	0.79	0.13	3.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
n-Propylbenzene	4.9	0.074	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
sec-Butylbenzene	1.6	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
tert-Butylbenzene	0.36	0.10	1.0	J	µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 9:39:00 PM	R51242
Xylenes, Total	3.0	0.32	1.5		µg/L	1	5/11/2018 9:39:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 4/30/2018
Lab ID: 1805106-010
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/11/2018 9:39:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805106-011
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 8:46:29 AM	G5104
Surr: BFB	93.0	0	69.3-150		%Rec	1	5/5/2018 8:46:29 AM	G5104
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,4-Trimethylbenzene	0.15	0.11	1.0	J	µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Acetone	ND	0.82	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805106-011
Matrix: AQUEOUS
Received Date: 5/2/2018 9:20:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 2:57:06 PM	W5119
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 2:57:06 PM	W5119
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 2:57:06 PM	W5119
Surr: 1,2-Dichloroethane-d4	94.0	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: Dibromofluoromethane	94.3	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	5/10/2018 2:57:06 PM	W5119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0848		0.00500	1	05/09/2018 18:32	WG1103662

Method Blank (MB)

(MB) R3308393-1 05/09/18 17:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L990138-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990138-02 05/09/18 18:04 • (DUP) R3308393-4 05/09/18 18:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L990813-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990813-02 05/09/18 18:21 • (DUP) R3308393-7 05/09/18 18:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308393-2 05/09/18 18:00 • (LCSD) R3308393-3 05/09/18 18:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.105	0.0956	105	95.6	85.0-115			9.37	20

L990235-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L990235-02 05/09/18 18:06 • (MS) R3308393-5 05/09/18 18:07

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Cyanide	0.100	ND	0.0921	92.1	1	75.0-125	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.47	1.0	0.5000	0	94.7	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.0	50	150			J
Iron	0.027	0.020	0.02000	0	135	50	150			
Magnesium	0.44	1.0	0.5000	0	88.3	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.49	1.0	0.5000	0	98.5	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Zinc	0.0070	0.010	0.005000	0	140	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51375**			RunNo: **51375**					
Prep Date:		Analysis Date: **5/18/2018**			SeqNo: **1671731**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675221**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675222**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.9	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675223**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID	**MB-B**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B51452**			RunNo: **51452**					
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676345**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LCS-B**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B51452**			RunNo: **51452**					
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676349**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	107	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676350**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.43	1.0	0.5000	0	86.0	50	150			J

Sample ID	**MB-C**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**C51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676401**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-C**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**C51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676402**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.3	50	150			J

Sample ID	**LCS-C**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**C51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676403**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**A51516**		RunNo:	**51516**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1679019**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A51516**		RunNo:	**51516**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1679020**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.50	1.0	0.5000	0	99.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LLLCS-37927**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **37927**	RunNo: **51094**
Prep Date: **5/3/2018**	Analysis Date: **5/7/2018**	SeqNo: **1660283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0026	0.0020	0.002000	0	132	50	150			
Cadmium	0.0023	0.0020	0.002000	0	116	50	150			
Chromium	0.0053	0.0060	0.006000	0	88.5	50	150			J
Copper	0.0052	0.0060	0.006000	0	86.8	50	150			J
Iron	0.023	0.020	0.02000	0	115	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0046	0.0050	0.005000	0	91.8	50	150			J
Zinc	0.0063	0.010	0.005000	0	127	50	150			J

Sample ID **LCS-37927**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **37927**	RunNo: **51094**
Prep Date: **5/3/2018**	Analysis Date: **5/7/2018**	SeqNo: **1660284** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0	105	85	115			
Cadmium	0.54	0.0020	0.5000	0	107	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **MB-37927**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **37927**	RunNo: **51094**
Prep Date: **5/3/2018**	Analysis Date: **5/7/2018**	SeqNo: **1660299** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	0.00064	0.0020								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656782** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656783** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00047	0.00050	0.0005000	0	93.2	50	150			J
Selenium	0.0011	0.0010	0.001000	0	113	50	150			
Uranium	0.00047	0.00050	0.0005000	0	93.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51024**	RunNo: **51024**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1656784** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	95.5	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.012	0.00050	0.01250	0	93.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666235** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666236** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666236**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.6	50	150			J
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J
Selenium	0.00095	0.0010	0.001000	0	95.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.3	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666237**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	96.3	85	115			

Sample ID	**1805106-003CMS**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**WEST LDU**	Batch ID:	**B51261**	RunNo:	**51261**					
Prep Date:		Analysis Date:	**5/14/2018**	SeqNo:	**1666252**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.14	0.0050	0.1250	0.004987	106	70	130			
Lead	0.055	0.0025	0.06250	0	88.4	70	130			
Selenium	0.12	0.0050	0.1250	0.007517	87.3	70	130			
Uranium	0.063	0.0025	0.06250	0.0005835	100	70	130			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A51316**	RunNo:	**51316**					
Prep Date:		Analysis Date:	**5/16/2018**	SeqNo:	**1669003**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A51316**	RunNo:	**51316**					
Prep Date:		Analysis Date:	**5/16/2018**	SeqNo:	**1669004**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**MB-37927**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660630**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-37927**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660631**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	94.9	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00090	0.0010	0.001000	0	90.3	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	106	50	150			

Sample ID	**MSLCS-37927**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**37927**	RunNo:	**51113**					
Prep Date:	**5/3/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660632**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.3	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.014	0.00050	0.01250	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID	**MB-37992**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**37992**	RunNo:	**51126**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660989**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-37992**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**37992**	RunNo:	**51126**					
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1660990**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51270**	RunNo: **51270**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666618** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51270**	RunNo: **51270**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666619** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51421**	RunNo: **51421**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51421**	RunNo: **51421**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.9	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **LCS-37932**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.7	70	130			
Surr: DNOP	0.56		0.5000		112	76.7	135			

Sample ID **MB-37932**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **37932**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/3/2018**	SeqNo: **1656857** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		117	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G51049**	RunNo: **51049**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658204** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	105	79.5	127			
Surr: BFB	21		20.00		106	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW**	Batch ID: **SL51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1666418** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW**	Batch ID: **SL51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1666419** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663347** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.25	1.0								J
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663347** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.4	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663350** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.8	70	130			
Toluene	19	1.0	20.00	0	93.5	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51196**	RunNo: **51196**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663350** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	96.2	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.5	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.7	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665695** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.31	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**	
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.12	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666778** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **lcs-37947**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663208** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	40.5	108			
2-Chlorophenol	150	10	200.0	0	74.3	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	68.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.2	35.6	91.4			
N-Nitrosodi-n-propylamine	81	10	100.0	0	81.4	41.6	114			
4-Nitrophenol	140	10	200.0	0	71.4	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	75.9	25.3	98.5			
Phenol	120	10	200.0	0	61.6	20.9	75.1			
Pyrene	78	10	100.0	0	78.5	45.6	108			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		67.5	15	114			
Surr: Phenol-d5	120		200.0		59.6	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.4	15	161			
Surr: Nitrobenzene-d5	75		100.0		75.4	29.3	120			
Surr: 2-Fluorobiphenyl	79		100.0		79.2	17.5	116			
Surr: 4-Terphenyl-d14	110		100.0		108	21	92.2			S

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	14	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**	
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805106**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (API)

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**	
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.9	15	114			
Surr: Phenol-d5	62		200.0		31.2	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		90.8	15	161			
Surr: Nitrobenzene-d5	64		100.0		64.0	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	17.5	116			
Surr: 4-Terphenyl-d14	64		100.0		64.3	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805106 | RcptNo: 1

Received By: **Isaiah Ortiz** 5/2/2018 9:20:00 AM IO

Completed By: **Anne Thorne** 5/2/2018 11:44:03 AM Anne Thorne

Reviewed By: ENM 5/3/18

CB: JO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3D, 1 (<2 or >12 unless noted)

Adjusted? NO

Checked by: JMO

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 5/2/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	0.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	0920	H_2O	EB02	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Courier	Date	Time
5/1/18	0700		I. Ortiz		5/2/18	920
Date:	Time:	Relinquished by:	Received by:		Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/30/18	1350	H_2O	EAST LDU	40ml VOA-5	HCl	-002	X		X													
				250 ml Amber-1	Neat	-002			X													
				250 ml Plastic-1	HNO_3	-002												X				
				125 ml Plastic-1	HNO_3	-002												X				

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/1/18	0700			Courier	5/2/18	920
Date:	Time:	Relinquished by:	Received by:		Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
4/30/18	1415	H_2O	~~WEST~~ ~~EAST~~ LDU	40ml VOA-5	HCl	003	X		X													
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	003												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/1/18	0700		Courier		
			J. Ou	5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1430	H_2O	FB02	40ml VOA-5	HCl	204			X							X						
				250 ml Amber-1	Neat	204			X													
				250 ml Plastic-1	HNO_3	204												X				
				125 ml Plastic-1	HNO_3	204												X	X			
				125 ml Plastic-1	H_2SO_4	204													X			
				125 ml Plastic-1	Neat	204													X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/1/18	0700			5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1510	H_2O	NAPIS-2	40ml VOA-5	HCl	105			X							X						
				250 ml Amber-1	Neat	105			X													
				250 ml Plastic-1	HNO_3	105												X				
				125 ml Plastic-1	HNO_3	105												X	X			
				125 ml Plastic-1	H_2SO_4	105													X			
				125 ml Plastic-1	Neat	105													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/1/18	0700			5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1540	H_2O	KA-3	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/1/18	0700		Courier		
				5/2/18	920
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1605	H_2O	NAPIS-3	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/1/18	0700		Courier		
				5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
4/30/18	1650	H_2O	OAPIS-1	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber - 2	Neat	-002											X						
				250 ml Amber-1	Neat	-003			X														
				250 ml Plastic-1	HNO_3	-004												X					
				125 ml Plastic-1	HNO_3	-005												X	X				
				125 ml Plastic-1	H_2SO_4	-006													X				
				125 ml Plastic-1	Neat	-007													X				
				500 ml Plastic-1	NAOH	-008														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/1/18	0700		Courier		
			T. [illegible]	5/02/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	1720	H_2O	STP-1-NW	40ml VOA-5	HCl	209			X							X						
				250 ml Amber-1	Neat	209			X													
				250 ml Plastic-1	HNO_3	209												X				
				125 ml Plastic-1	HNO_3	209												X	X			
				125 ml Plastic-1	H_2SO_4	209													X			
				125 ml Plastic-1	Neat	209													X			

Date: 5/1/18 Time: 0700 Relinquished by: _____
Received by: _____ Date: 5/2/18 Time: 920

Date: _____ Time: _____ Relinquished by: _____
Received by: _____ Date: _____ Time: _____

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (API)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805106 KT 05/04/18	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
4/30/18	—	H_2O	DUP02	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			
4/30/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCL	007										X						

Date	Time	Relinquished by:	Received by:	Date	Time
5/1/18	0700		I. Ortiz	5/2/18	920
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0848		0.00500	1	05/09/2018 18:32	WG1103662

Method Blank (MB)

(MB) R3308393-1 05/09/18 17:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L990138-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990138-02 05/09/18 18:04 • (DUP) R3308393-4 05/09/18 18:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L990813-02 Original Sample (OS) • Duplicate (DUP)

(OS) L990813-02 05/09/18 18:21 • (DUP) R3308393-7 05/09/18 18:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3308393-2 05/09/18 18:00 • (LCSD) R3308393-3 05/09/18 18:01

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.105	0.0956	105	95.6	85.0-115			9.37	20

L990235-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L990235-02 05/09/18 18:06 • (MS) R3308393-5 05/09/18 18:07

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Cyanide	0.100	ND	0.0921	92.1	1	75.0-125	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 08, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 GW Sampling MKTF OrderNo.: 1805201

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/3/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805201**
Date Reported: **6/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/7/2018 7:37:55 PM	37961
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/4/2018 2:29:52 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 2:29:52 AM	37933
Surr: DNOP	127	0	76.7-135		%Rec	1	5/4/2018 2:29:52 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 8:41:33 PM	G51065
Surr: BFB	90.3	0	69.3-150		%Rec	1	5/5/2018 8:41:33 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	5/8/2018 1:09:55 PM	R51131
Chloride	0.15	0.029	0.50	J	mg/L	1	5/8/2018 1:09:55 PM	R51131
Bromide	ND	0.027	0.10		mg/L	1	5/8/2018 1:09:55 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/8/2018 1:09:55 PM	R51131
Sulfate	ND	0.21	0.50		mg/L	1	5/8/2018 1:09:55 PM	R51131
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/21/2018 12:52:03 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:38:29 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:38:29 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:38:29 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:38:29 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:38:29 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:38:29 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:38:29 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:38:29 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:38:29 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:38:29 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:39:41 PM	C51452
Zinc	0.0065	0.0021	0.010	J	mg/L	1	5/18/2018 11:38:29 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 2:40:39 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 2:40:39 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 2:40:39 PM	38078
Copper	ND	0.0041	0.0060		mg/L	1	5/21/2018 2:40:39 PM	38078
Iron	0.014	0.010	0.020	J	mg/L	1	5/21/2018 2:40:39 PM	38078
Manganese	ND	0.0011	0.0020		mg/L	1	5/21/2018 2:40:39 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 2:40:39 PM	38078
Zinc	ND	0.0033	0.010		mg/L	1	5/21/2018 2:40:39 PM	38078

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/14/2018 6:22:51 PM	B51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 6:22:51 PM	B51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 6:22:51 PM	B51261
Uranium	ND	0.000096	0.00050		mg/L	1	5/14/2018 6:22:51 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/15/2018 10:04:01 AM	38078
Lead	ND	0.00023	0.00050		mg/L	1	5/15/2018 10:04:01 AM	38078
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:04:01 AM	38078
Uranium	ND	0.000068	0.00050		mg/L	1	5/15/2018 10:04:01 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000064	0.000037	0.00020	J	mg/L	1	5/15/2018 3:13:08 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzoic acid	ND	6.3	20		µg/L	1	5/10/2018 3:35:49 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 3:35:49 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 3:35:49 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 3:35:49 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 3:35:49 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 3:35:49 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 3:35:49 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 3:35:49 PM	37947
Surr: 2-Fluorophenol	47.9	0	15-114		%Rec	1	5/10/2018 3:35:49 PM	37947
Surr: Phenol-d5	33.6	0	15-97.9		%Rec	1	5/10/2018 3:35:49 PM	37947
Surr: 2,4,6-Tribromophenol	81.6	0	15-161		%Rec	1	5/10/2018 3:35:49 PM	37947
Surr: Nitrobenzene-d5	76.6	0	29.3-120		%Rec	1	5/10/2018 3:35:49 PM	37947
Surr: 2-Fluorobiphenyl	84.4	0	17.5-116		%Rec	1	5/10/2018 3:35:49 PM	37947
Surr: 4-Terphenyl-d14	80.2	0	21-92.2		%Rec	1	5/10/2018 3:35:49 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Acetone	3.0	0.82	10	J	µg/L	1	5/8/2018 2:25:14 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 2:25:14 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 2:25:14 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 2:25:14 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 2:25:14 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 2:25:14 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 2:25:14 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:00:00 AM
Lab ID: 1805201-001
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	93.3	0	70-130		%Rec	1	5/8/2018 2:25:14 PM	W5112
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/8/2018 2:25:14 PM	W5112
Surr: Dibromofluoromethane	95.4	0	70-130		%Rec	1	5/8/2018 2:25:14 PM	W5112
Surr: Toluene-d8	92.6	0	70-130		%Rec	1	5/8/2018 2:25:14 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	5/7/2018 7:53:25 PM	37961
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/4/2018 3:35:46 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 3:35:46 AM	37933
Surr: DNOP	125	0	76.7-135		%Rec	1	5/4/2018 3:35:46 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 9:04:47 PM	G51065
Surr: BFB	93.9	0	69.3-150		%Rec	1	5/5/2018 9:04:47 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	5/8/2018 1:34:44 PM	R51131
Chloride	0.21	0.029	0.50	J	mg/L	1	5/8/2018 1:34:44 PM	R51131
Bromide	ND	0.027	0.10		mg/L	1	5/8/2018 1:34:44 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/8/2018 1:34:44 PM	R51131
Sulfate	ND	0.21	0.50		mg/L	1	5/8/2018 1:34:44 PM	R51131
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/21/2018 1:43:30 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 11:40:37 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:40:37 AM	A51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 11:40:37 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:40:37 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:40:37 AM	A51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 11:40:37 AM	A51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 11:40:37 AM	A51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 11:40:37 AM	A51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 11:40:37 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:40:37 AM	A51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 2:41:48 PM	C51452
Zinc	0.0064	0.0021	0.010	J	mg/L	1	5/18/2018 11:40:37 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 2:42:48 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 2:42:48 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 2:42:48 PM	38078
Copper	ND	0.0041	0.0060		mg/L	1	5/21/2018 2:42:48 PM	38078
Iron	ND	0.010	0.020		mg/L	1	5/21/2018 2:42:48 PM	38078
Manganese	ND	0.0011	0.0020		mg/L	1	5/21/2018 2:42:48 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 2:42:48 PM	38078
Zinc	ND	0.0033	0.010		mg/L	1	5/21/2018 2:42:48 PM	38078

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/14/2018 6:25:52 PM	B51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 6:25:52 PM	B51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 6:25:52 PM	B51261
Uranium	ND	0.000096	0.00050		mg/L	1	5/14/2018 6:25:52 PM	B51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/15/2018 10:06:25 AM	38078
Lead	ND	0.00023	0.00050		mg/L	1	5/15/2018 10:06:25 AM	38078
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:06:25 AM	38078
Uranium	ND	0.000068	0.00050		mg/L	1	5/15/2018 10:06:25 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000063	0.000037	0.00020	J	mg/L	1	5/15/2018 3:15:26 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzoic acid	27	6.3	20		µg/L	1	5/10/2018 4:04:11 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 4:04:11 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 4:04:11 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 4:04:11 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 4:04:11 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 4:04:11 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 4:04:11 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 4:04:11 PM	37947
Surr: 2-Fluorophenol	50.0	0	15-114		%Rec	1	5/10/2018 4:04:11 PM	37947
Surr: Phenol-d5	35.3	0	15-97.9		%Rec	1	5/10/2018 4:04:11 PM	37947
Surr: 2,4,6-Tribromophenol	84.2	0	15-161		%Rec	1	5/10/2018 4:04:11 PM	37947
Surr: Nitrobenzene-d5	78.3	0	29.3-120		%Rec	1	5/10/2018 4:04:11 PM	37947
Surr: 2-Fluorobiphenyl	86.3	0	17.5-116		%Rec	1	5/10/2018 4:04:11 PM	37947
Surr: 4-Terphenyl-d14	77.9	0	21-92.2		%Rec	1	5/10/2018 4:04:11 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Acetone	2.2	0.82	10	J	µg/L	1	5/8/2018 2:54:49 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 2:54:49 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 2:54:49 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 2:54:49 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 2:54:49 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 2:54:49 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 2:54:49 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 10:40:00 AM
Lab ID: 1805201-002
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	95.0	0	70-130		%Rec	1	5/8/2018 2:54:49 PM	W5112
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/8/2018 2:54:49 PM	W5112
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	5/8/2018 2:54:49 PM	W5112
Surr: Toluene-d8	92.9	0	70-130		%Rec	1	5/8/2018 2:54:49 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/7/2018 8:55:25 PM	37961
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/4/2018 3:57:42 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 3:57:42 AM	37933
Surr: DNOP	125	0	76.7-135		%Rec	1	5/4/2018 3:57:42 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.023	0.021	0.050	J	mg/L	1	5/5/2018 9:27:59 PM	G51065
Surr: BFB	87.6	0	69.3-150		%Rec	1	5/5/2018 9:27:59 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.3	0.15	0.50		mg/L	5	5/8/2018 2:24:22 PM	R51131
Chloride	400	1.5	25		mg/L	50	5/21/2018 2:34:56 PM	R51436
Bromide	0.91	0.13	0.50		mg/L	5	5/8/2018 2:24:22 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/8/2018 2:24:22 PM	R51131
Sulfate	480	4.1	10		mg/L	20	5/8/2018 2:36:47 PM	R51131
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/21/2018 1:56:21 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.016	0.00099	0.0020		mg/L	1	5/18/2018 11:42:47 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:42:47 AM	A51375
Calcium	63	0.078	1.0		mg/L	1	5/18/2018 11:42:47 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:42:47 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:42:47 AM	A51375
Iron	0.044	0.016	0.020		mg/L	1	5/18/2018 11:42:47 AM	A51375
Magnesium	12	0.25	1.0		mg/L	1	5/18/2018 11:42:47 AM	A51375
Manganese	0.0050	0.00039	0.0020		mg/L	1	5/18/2018 11:42:47 AM	A51375
Potassium	0.16	0.11	1.0	J	mg/L	1	5/18/2018 11:42:47 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:42:47 AM	A51375
Sodium	750	0.82	5.0	E	mg/L	5	5/23/2018 2:43:56 PM	C51452
Zinc	0.0054	0.0021	0.010	J	mg/L	1	5/18/2018 11:42:47 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	5/21/2018 2:44:55 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 2:44:55 PM	38078
Chromium	0.0041	0.0018	0.0060	J	mg/L	1	5/21/2018 2:44:55 PM	38078
Copper	0.0047	0.0041	0.0060	J	mg/L	1	5/21/2018 2:44:55 PM	38078
Iron	5.1	0.10	0.20	*	mg/L	10	5/23/2018 6:26:37 PM	38078
Manganese	0.14	0.0011	0.0020	*	mg/L	1	5/21/2018 2:44:55 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 2:44:55 PM	38078
Zinc	0.014	0.0033	0.010		mg/L	1	5/21/2018 2:44:55 PM	38078

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/16/2018 3:15:51 PM	A51316
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 6:28:54 PM	B51261
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:15:51 PM	A51316
Uranium	0.035	0.00048	0.0025	*	mg/L	5	5/16/2018 3:15:51 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0023	0.0021	0.0050	J	mg/L	5	5/15/2018 11:21:54 AM	38078
Lead	0.0029	0.0011	0.0025		mg/L	5	5/15/2018 11:21:54 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:21:54 AM	38078
Uranium	0.039	0.00034	0.0025	*	mg/L	5	5/15/2018 11:21:54 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000083	0.000037	0.00020	J	mg/L	1	5/15/2018 3:17:45 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Benzoic acid	15	6.3	20	J	µg/L	1	5/10/2018 4:32:31 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 4:32:31 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 4:32:31 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 4:32:31 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 4:32:31 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 4:32:31 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 4:32:31 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 4:32:31 PM	37947
Surr: 2-Fluorophenol	41.5	0	15-114		%Rec	1	5/10/2018 4:32:31 PM	37947
Surr: Phenol-d5	28.4	0	15-97.9		%Rec	1	5/10/2018 4:32:31 PM	37947
Surr: 2,4,6-Tribromophenol	81.2	0	15-161		%Rec	1	5/10/2018 4:32:31 PM	37947
Surr: Nitrobenzene-d5	67.8	0	29.3-120		%Rec	1	5/10/2018 4:32:31 PM	37947
Surr: 2-Fluorobiphenyl	70.8	0	17.5-116		%Rec	1	5/10/2018 4:32:31 PM	37947
Surr: 4-Terphenyl-d14	90.4	0	21-92.2		%Rec	1	5/10/2018 4:32:31 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Methyl tert-butyl ether (MTBE)	1.8	0.24	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2-Dichloroethane (EDC)	1.2	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Acetone	1.7	0.82	10	J	µg/L	1	5/8/2018 3:24:24 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 3:24:24 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 3:24:24 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
cis-1,2-DCE	2.4	0.20	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1-Dichloroethane	33	0.40	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1-Dichloroethene	2.0	0.081	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 3:24:24 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 3:24:24 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Tetrachloroethene (PCE)	0.16	0.13	1.0	J	µg/L	1	5/8/2018 3:24:24 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1,1-Trichloroethane	0.44	0.073	1.0	J	µg/L	1	5/8/2018 3:24:24 PM	W5112
1,1,2-Trichloroethane	0.37	0.14	1.0	J	µg/L	1	5/8/2018 3:24:24 PM	W5112
Trichloroethene (TCE)	2.0	0.11	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 3:24:24 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 3:24:24 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 11:10:00 AM
Lab ID: 1805201-003 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	95.8	0	70-130		%Rec	1	5/8/2018 3:24:24 PM	W5112
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/8/2018 3:24:24 PM	W5112
Surr: Dibromofluoromethane	96.1	0	70-130		%Rec	1	5/8/2018 3:24:24 PM	W5112
Surr: Toluene-d8	92.9	0	70-130		%Rec	1	5/8/2018 3:24:24 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/7/2018 9:10:51 PM	37961
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.66	0.63	1.0	J	mg/L	1	5/4/2018 4:19:33 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 4:19:33 AM	37933
Surr: DNOP	129	0	76.7-135		%Rec	1	5/4/2018 4:19:33 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 9:51:19 PM	G51065
Surr: BFB	87.8	0	69.3-150		%Rec	1	5/5/2018 9:51:19 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.68	0.15	0.50		mg/L	5	5/3/2018 11:14:25 AM	R51040
Chloride	160	0.59	10		mg/L	20	5/3/2018 11:26:47 AM	R51040
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/3/2018 11:14:25 AM	R51040
Bromide	0.90	0.13	0.50		mg/L	5	5/3/2018 11:14:25 AM	R51040
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/3/2018 11:14:25 AM	R51040
Phosphorus, Orthophosphate (As P)	0.78	0.46	2.5	J	mg/L	5	5/3/2018 11:14:25 AM	R51040
Sulfate	460	4.1	10		mg/L	20	5/21/2018 11:35:23 AM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.021	0.00099	0.0020		mg/L	1	5/18/2018 11:44:55 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:44:55 AM	A51375
Calcium	63	0.078	1.0		mg/L	1	5/18/2018 11:44:55 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:44:55 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:44:55 AM	A51375
Iron	0.030	0.016	0.020		mg/L	1	5/18/2018 11:44:55 AM	A51375
Magnesium	8.8	0.25	1.0		mg/L	1	5/18/2018 11:44:55 AM	A51375
Manganese	0.38	0.00039	0.0020	*	mg/L	1	5/18/2018 11:44:55 AM	A51375
Potassium	0.25	0.11	1.0	J	mg/L	1	5/18/2018 11:44:55 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:44:55 AM	A51375
Sodium	490	0.82	5.0		mg/L	5	5/23/2018 2:46:08 PM	C51452
Zinc	0.0048	0.0021	0.010	J	mg/L	1	5/18/2018 11:44:55 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	5/21/2018 2:56:13 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 2:56:13 PM	38078
Chromium	0.0031	0.0018	0.0060	J	mg/L	1	5/21/2018 2:56:13 PM	38078
Copper	0.0052	0.0041	0.0060	J	mg/L	1	5/21/2018 2:56:13 PM	38078
Iron	3.7	0.051	0.10	*	mg/L	5	5/22/2018 3:23:06 PM	38078
Manganese	0.55	0.0011	0.0020	*	mg/L	1	5/22/2018 3:21:08 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 2:56:13 PM	38078

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.010	0.0033	0.010		mg/L	1	5/21/2018 2:56:13 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0015	0.00042	0.0010		mg/L	1	5/14/2018 6:47:03 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 6:47:03 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 6:47:03 PM	C51261
Uranium	0.0079	0.000096	0.00050		mg/L	1	5/14/2018 6:47:03 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0021	0.0021	0.0050	J	mg/L	5	5/15/2018 11:24:16 AM	38078
Lead	0.0017	0.00023	0.00050		mg/L	1	5/15/2018 10:11:07 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:24:16 AM	38078
Uranium	0.0084	0.000068	0.00050		mg/L	1	5/15/2018 10:11:07 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000060	0.000037	0.00020	J	mg/L	1	5/15/2018 3:19:56 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzoic acid	ND	6.3	20		µg/L	1	5/10/2018 5:00:44 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 5:00:44 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 5:00:44 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 5:00:44 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 5:00:44 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 5:00:44 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 5:00:44 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 5:00:44 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Phenol	ND	6.0	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:00:44 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 5:00:44 PM	37947
Surr: 2-Fluorophenol	44.7	0	15-114		%Rec	1	5/10/2018 5:00:44 PM	37947
Surr: Phenol-d5	31.4	0	15-97.9		%Rec	1	5/10/2018 5:00:44 PM	37947
Surr: 2,4,6-Tribromophenol	88.2	0	15-161		%Rec	1	5/10/2018 5:00:44 PM	37947
Surr: Nitrobenzene-d5	69.7	0	29.3-120		%Rec	1	5/10/2018 5:00:44 PM	37947
Surr: 2-Fluorobiphenyl	78.1	0	17.5-116		%Rec	1	5/10/2018 5:00:44 PM	37947
Surr: 4-Terphenyl-d14	82.4	0	21-92.2		%Rec	1	5/10/2018 5:00:44 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Methyl tert-butyl ether (MTBE)	7.3	0.24	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Acetone	2.7	0.82	10	J	µg/L	1	5/8/2018 3:53:57 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 3:53:57 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 3:53:57 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 3:53:57 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 3:53:57 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 3:53:57 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 12:35:00 PM
Lab ID: 1805201-004 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 3:53:57 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 3:53:57 PM	W5112
Surr: 1,2-Dichloroethane-d4	93.5	0	70-130		%Rec	1	5/8/2018 3:53:57 PM	W5112
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	5/8/2018 3:53:57 PM	W5112
Surr: Dibromofluoromethane	95.8	0	70-130		%Rec	1	5/8/2018 3:53:57 PM	W5112
Surr: Toluene-d8	94.5	0	70-130		%Rec	1	5/8/2018 3:53:57 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/4/2018 4:41:26 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 4:41:26 AM	37933
Surr: DNOP	122	0	76.7-135		%Rec	1	5/4/2018 4:41:26 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/5/2018 10:14:48 PM	G51065
Surr: BFB	89.0	0	69.3-150		%Rec	1	5/5/2018 10:14:48 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.83	0.15	0.50		mg/L	5	5/3/2018 11:39:39 AM	R51040
Chloride	400	1.5	25		mg/L	50	5/21/2018 11:47:44 AM	R51436
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/3/2018 11:39:39 AM	R51040
Bromide	2.0	0.13	0.50		mg/L	5	5/3/2018 11:39:39 AM	R51040
Nitrogen, Nitrate (As N)	2.7	0.033	0.50		mg/L	5	5/3/2018 11:39:39 AM	R51040
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/3/2018 11:39:39 AM	R51040
Sulfate	150	10	25		mg/L	50	5/21/2018 11:47:44 AM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.046	0.00099	0.0020		mg/L	1	5/18/2018 11:53:29 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:53:29 AM	A51375
Calcium	43	0.078	1.0		mg/L	1	5/18/2018 11:53:29 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:53:29 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:53:29 AM	A51375
Iron	0.027	0.016	0.020		mg/L	1	5/18/2018 11:53:29 AM	A51375
Magnesium	8.6	0.25	1.0		mg/L	1	5/18/2018 11:53:29 AM	A51375
Manganese	0.0024	0.00039	0.0020		mg/L	1	5/18/2018 11:53:29 AM	A51375
Potassium	1.8	0.11	1.0		mg/L	1	5/18/2018 11:53:29 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:53:29 AM	A51375
Sodium	580	1.6	10		mg/L	10	5/24/2018 7:58:01 PM	A51516
Zinc	0.0076	0.0021	0.010	J	mg/L	1	5/18/2018 11:53:29 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.082	0.0010	0.0020		mg/L	1	5/21/2018 2:58:11 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 2:58:11 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 2:58:11 PM	38078
Copper	ND	0.0041	0.0060		mg/L	1	5/21/2018 2:58:11 PM	38078
Iron	2.6	0.051	0.10	*	mg/L	5	5/22/2018 3:27:10 PM	38078
Manganese	0.13	0.0011	0.0020	*	mg/L	1	5/22/2018 3:25:11 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 2:58:11 PM	38078
Zinc	0.016	0.0033	0.010		mg/L	1	5/21/2018 2:58:11 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0015	0.00042	0.0010		mg/L	1	5/14/2018 6:56:09 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 6:56:09 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 6:56:09 PM	C51261
Uranium	0.14	0.00096	0.0050	*	mg/L	10	5/16/2018 3:18:13 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0024	0.0021	0.0050	J	mg/L	5	5/15/2018 11:26:36 AM	38078
Lead	0.0022	0.00023	0.00050		mg/L	1	5/15/2018 10:13:28 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:26:36 AM	38078
Uranium	0.15	0.00068	0.0050	*	mg/L	10	5/15/2018 11:28:58 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000075	0.000037	0.00020	J	mg/L	1	5/15/2018 3:22:08 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Benzoic acid	20	6.3	20	J	µg/L	1	5/10/2018 5:29:03 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 5:29:03 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 5:29:03 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 5:29:03 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 5:29:03 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 5:29:03 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:29:03 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 5:29:03 PM	37947
Surr: 2-Fluorophenol	37.0	0	15-114		%Rec	1	5/10/2018 5:29:03 PM	37947
Surr: Phenol-d5	27.3	0	15-97.9		%Rec	1	5/10/2018 5:29:03 PM	37947
Surr: 2,4,6-Tribromophenol	68.6	0	15-161		%Rec	1	5/10/2018 5:29:03 PM	37947
Surr: Nitrobenzene-d5	59.6	0	29.3-120		%Rec	1	5/10/2018 5:29:03 PM	37947
Surr: 2-Fluorobiphenyl	61.7	0	17.5-116		%Rec	1	5/10/2018 5:29:03 PM	37947
Surr: 4-Terphenyl-d14	62.5	0	21-92.2		%Rec	1	5/10/2018 5:29:03 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Methyl tert-butyl ether (MTBE)	0.94	0.24	1.0	J	µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Acetone	1.7	0.82	10	J	µg/L	1	5/8/2018 4:23:28 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 4:23:28 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 4:23:28 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 4:23:28 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 4:23:28 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 4:23:28 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 4:23:28 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 1:40:00 PM
Lab ID: 1805201-005 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	96.2	0	70-130		%Rec	1	5/8/2018 4:23:28 PM	W5112
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/8/2018 4:23:28 PM	W5112
Surr: Dibromofluoromethane	95.9	0	70-130		%Rec	1	5/8/2018 4:23:28 PM	W5112
Surr: Toluene-d8	94.0	0	70-130		%Rec	1	5/8/2018 4:23:28 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0057	0.0049	0.0095	J	µg/L	1	5/7/2018 9:26:20 PM	37961
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.4	0.63	1.0		mg/L	1	5/4/2018 5:03:09 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 5:03:09 AM	37933
Surr: DNOP	126	0	76.7-135		%Rec	1	5/4/2018 5:03:09 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	23	1.1	2.5		mg/L	50	5/5/2018 10:38:14 PM	G51065
Surr: BFB	98.6	0	69.3-150		%Rec	50	5/5/2018 10:38:14 PM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/3/2018 12:05:22 PM	R51040
Chloride	500	1.5	25		mg/L	50	5/21/2018 12:00:35 PM	R51436
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	5/3/2018 12:18:13 PM	R51040
Bromide	0.20	0.027	0.10		mg/L	1	5/3/2018 12:05:22 PM	R51040
Nitrogen, Nitrate (As N)	0.17	0.0066	0.10		mg/L	1	5/3/2018 12:05:22 PM	R51040
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/3/2018 12:05:22 PM	R51040
Sulfate	29	10	25		mg/L	50	5/21/2018 12:00:35 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.26	0.00099	0.0020		mg/L	1	5/18/2018 11:55:38 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:55:38 AM	A51375
Calcium	110	0.39	5.0		mg/L	5	5/18/2018 1:31:44 PM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:55:38 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:55:38 AM	A51375
Iron	0.26	0.016	0.020		mg/L	1	5/18/2018 11:55:38 AM	A51375
Magnesium	20	0.25	1.0		mg/L	1	5/18/2018 11:55:38 AM	A51375
Manganese	1.9	0.0020	0.010	*	mg/L	5	5/18/2018 1:31:44 PM	A51375
Potassium	1.9	0.11	1.0		mg/L	1	5/18/2018 11:55:38 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:55:38 AM	A51375
Sodium	550	1.6	10		mg/L	10	5/23/2018 2:50:15 PM	C51452
Zinc	0.0047	0.0021	0.010	J	mg/L	1	5/18/2018 11:55:38 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.27	0.0010	0.0020		mg/L	1	5/21/2018 3:00:07 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 3:00:07 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 3:00:07 PM	38078
Copper	ND	0.0041	0.0060		mg/L	1	5/21/2018 3:00:07 PM	38078
Iron	1.3	0.051	0.10	*	mg/L	5	5/22/2018 3:31:16 PM	38078
Manganese	2.1	0.0055	0.010	*	mg/L	5	5/22/2018 3:31:16 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 3:00:07 PM	38078

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0060	0.0033	0.010	J	mg/L	1	5/21/2018 3:00:07 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0025	0.0021	0.0050	J	mg/L	5	5/16/2018 3:20:35 PM	A51316
Lead	0.0011	0.00017	0.00050		mg/L	1	5/14/2018 6:59:11 PM	C51261
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:20:35 PM	A51316
Uranium	0.013	0.000096	0.00050		mg/L	1	5/14/2018 6:59:11 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0030	0.0021	0.0050	J	mg/L	5	5/15/2018 11:31:19 AM	38078
Lead	0.0026	0.00023	0.00050		mg/L	1	5/15/2018 10:15:49 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:31:19 AM	38078
Uranium	0.015	0.000068	0.00050		mg/L	1	5/15/2018 10:15:49 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000061	0.000037	0.00020	J	mg/L	1	5/15/2018 3:24:21 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzoic acid	34	6.3	20		µg/L	1	5/10/2018 5:57:39 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 5:57:39 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 5:57:39 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 5:57:39 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 5:57:39 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 5:57:39 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 5:57:39 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 5:57:39 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Phenol	ND	6.0	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 5:57:39 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 5:57:39 PM	37947
Surr: 2-Fluorophenol	41.0	0	15-114		%Rec	1	5/10/2018 5:57:39 PM	37947
Surr: Phenol-d5	34.4	0	15-97.9		%Rec	1	5/10/2018 5:57:39 PM	37947
Surr: 2,4,6-Tribromophenol	88.8	0	15-161		%Rec	1	5/10/2018 5:57:39 PM	37947
Surr: Nitrobenzene-d5	58.6	0	29.3-120		%Rec	1	5/10/2018 5:57:39 PM	37947
Surr: 2-Fluorobiphenyl	80.8	0	17.5-116		%Rec	1	5/10/2018 5:57:39 PM	37947
Surr: 4-Terphenyl-d14	78.6	0	21-92.2		%Rec	1	5/10/2018 5:57:39 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	5500	12	200		µg/L	200	5/8/2018 5:52:09 PM	W5112
Toluene	29	1.3	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Ethylbenzene	300	1.9	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Methyl tert-butyl ether (MTBE)	130	4.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2,4-Trimethylbenzene	ND	2.3	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,3,5-Trimethylbenzene	ND	1.7	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2-Dichloroethane (EDC)	8.3	8.0	20	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Naphthalene	7.1	2.3	40	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
1-Methylnaphthalene	10	3.2	80	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
2-Methylnaphthalene	ND	3.0	80		µg/L	20	5/8/2018 6:21:33 PM	W5112
Acetone	ND	16	200		µg/L	20	5/8/2018 6:21:33 PM	W5112
Bromobenzene	ND	2.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Bromodichloromethane	ND	3.5	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Bromoform	ND	4.2	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Bromomethane	ND	5.1	60		µg/L	20	5/8/2018 6:21:33 PM	W5112
2-Butanone	ND	23	200		µg/L	20	5/8/2018 6:21:33 PM	W5112
Carbon disulfide	ND	8.0	200		µg/L	20	5/8/2018 6:21:33 PM	W5112
Carbon Tetrachloride	ND	2.2	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Chlorobenzene	ND	2.1	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Chloroethane	ND	4.7	40		µg/L	20	5/8/2018 6:21:33 PM	W5112
Chloroform	ND	8.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Chloromethane	ND	5.9	60		µg/L	20	5/8/2018 6:21:33 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
2-Chlorotoluene	ND	8.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
4-Chlorotoluene	ND	8.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
cis-1,2-DCE	22	4.1	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	5/8/2018 6:21:33 PM	W5112
Dibromochloromethane	ND	1.4	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Dibromomethane	ND	1.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Dichlorodifluoromethane	ND	20	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1-Dichloroethane	66	8.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1-Dichloroethene	16	1.6	20	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2-Dichloropropane	ND	2.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,3-Dichloropropane	ND	3.3	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
2,2-Dichloropropane	ND	3.1	40		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1-Dichloropropene	ND	1.9	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Hexachlorobutadiene	ND	16	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
2-Hexanone	ND	13	200		µg/L	20	5/8/2018 6:21:33 PM	W5112
Isopropylbenzene	36	1.0	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
4-Isopropyltoluene	2.0	1.9	20	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
4-Methyl-2-pentanone	ND	14	200		µg/L	20	5/8/2018 6:21:33 PM	W5112
Methylene Chloride	ND	2.2	60		µg/L	20	5/8/2018 6:21:33 PM	W5112
n-Butylbenzene	12	2.6	60	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
n-Propylbenzene	76	1.5	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
sec-Butylbenzene	8.2	2.2	20	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
Styrene	ND	3.1	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
tert-Butylbenzene	ND	2.1	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	5/8/2018 6:21:33 PM	W5112
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
trans-1,2-DCE	ND	3.7	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Trichlorofluoromethane	ND	3.7	20		µg/L	20	5/8/2018 6:21:33 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 3:40:00 PM
Lab ID: 1805201-006 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	5/8/2018 6:21:33 PM	W5112
Vinyl chloride	31	3.6	20		µg/L	20	5/8/2018 6:21:33 PM	W5112
Xylenes, Total	6.5	6.4	30	J	µg/L	20	5/8/2018 6:21:33 PM	W5112
Surr: 1,2-Dichloroethane-d4	92.7	0	70-130		%Rec	20	5/8/2018 6:21:33 PM	W5112
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	20	5/8/2018 6:21:33 PM	W5112
Surr: Dibromofluoromethane	93.2	0	70-130		%Rec	20	5/8/2018 6:21:33 PM	W5112
Surr: Toluene-d8	95.3	0	70-130		%Rec	20	5/8/2018 6:21:33 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.2	0.63	1.0		mg/L	1	5/4/2018 5:25:06 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 5:25:06 AM	37933
Surr: DNOP	123	0	76.7-135		%Rec	1	5/4/2018 5:25:06 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	9.1	0.42	1.0		mg/L	20	5/6/2018 2:30:50 AM	G51065
Surr: BFB	97.9	0	69.3-150		%Rec	20	5/6/2018 2:30:50 AM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.3	0.15	0.50		mg/L	5	5/3/2018 12:56:48 PM	R51040
Chloride	520	1.5	25		mg/L	50	5/21/2018 12:26:20 PM	R51436
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/3/2018 12:56:48 PM	R51040
Bromide	1.1	0.13	0.50		mg/L	5	5/3/2018 12:56:48 PM	R51040
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/3/2018 12:56:48 PM	R51040
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/3/2018 12:56:48 PM	R51040
Sulfate	15	1.0	2.5		mg/L	5	5/21/2018 12:13:27 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.26	0.00099	0.0020		mg/L	1	5/18/2018 11:57:46 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:57:46 AM	A51375
Calcium	73	0.078	1.0		mg/L	1	5/18/2018 11:57:46 AM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:57:46 AM	A51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 11:57:46 AM	A51375
Iron	0.030	0.016	0.020		mg/L	1	5/18/2018 11:57:46 AM	A51375
Magnesium	13	0.25	1.0		mg/L	1	5/18/2018 11:57:46 AM	A51375
Manganese	0.57	0.00039	0.0020	*	mg/L	1	5/18/2018 11:57:46 AM	A51375
Potassium	2.0	0.11	1.0		mg/L	1	5/18/2018 11:57:46 AM	A51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 11:57:46 AM	A51375
Sodium	650	1.6	10		mg/L	10	5/23/2018 2:52:35 PM	C51452
Zinc	0.0051	0.0021	0.010	J	mg/L	1	5/18/2018 11:57:46 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.26	0.0010	0.0020		mg/L	1	5/21/2018 3:02:03 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 3:02:03 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 3:02:03 PM	38078
Copper	ND	0.0041	0.0060		mg/L	1	5/21/2018 3:02:03 PM	38078
Iron	0.36	0.010	0.020	*	mg/L	1	5/22/2018 3:38:00 PM	38078
Manganese	0.62	0.0011	0.0020	*	mg/L	1	5/22/2018 3:38:00 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 3:02:03 PM	38078
Zinc	ND	0.0033	0.010		mg/L	1	5/21/2018 3:02:03 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0021	0.0021	0.0050	J	mg/L	5	5/16/2018 3:22:58 PM	A51316
Lead	0.00028	0.00017	0.00050	J	mg/L	1	5/14/2018 7:02:12 PM	C51261
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:22:58 PM	A51316
Uranium	0.024	0.000096	0.00050		mg/L	1	5/14/2018 7:02:12 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0025	0.0021	0.0050	J	mg/L	5	5/15/2018 11:33:42 AM	38078
Lead	0.00065	0.00023	0.00050		mg/L	1	5/15/2018 10:18:09 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:33:42 AM	38078
Uranium	0.023	0.000068	0.00050		mg/L	1	5/15/2018 10:18:09 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000053	0.000037	0.00020	J	mg/L	1	5/15/2018 3:26:34 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzoic acid	ND	6.3	20		µg/L	1	5/10/2018 6:26:40 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 6:26:40 PM	37947
1-Methylnaphthalene	22	7.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 6:26:40 PM	37947
3+4-Methylphenol	9.0	5.4	10	J	µg/L	1	5/10/2018 6:26:40 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 6:26:40 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Naphthalene	16	5.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 6:26:40 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 6:26:40 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 6:26:40 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	8.8	6.0	10	J	µg/L	1	5/10/2018 6:26:40 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 6:26:40 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 6:26:40 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 6:26:40 PM	37947
Surr: 2-Fluorophenol	42.8	0	15-114		%Rec	1	5/10/2018 6:26:40 PM	37947
Surr: Phenol-d5	31.7	0	15-97.9		%Rec	1	5/10/2018 6:26:40 PM	37947
Surr: 2,4,6-Tribromophenol	76.9	0	15-161		%Rec	1	5/10/2018 6:26:40 PM	37947
Surr: Nitrobenzene-d5	63.5	0	29.3-120		%Rec	1	5/10/2018 6:26:40 PM	37947
Surr: 2-Fluorobiphenyl	65.5	0	17.5-116		%Rec	1	5/10/2018 6:26:40 PM	37947
Surr: 4-Terphenyl-d14	73.6	0	21-92.2		%Rec	1	5/10/2018 6:26:40 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2900	6.2	100		µg/L	100	5/8/2018 6:50:50 PM	W5112
Toluene	39	0.64	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Ethylbenzene	240	0.93	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Methyl tert-butyl ether (MTBE)	97	2.4	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2,4-Trimethylbenzene	200	1.1	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,3,5-Trimethylbenzene	9.2	0.87	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2-Dichloroethane (EDC)	4.8	4.0	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Naphthalene	23	1.1	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
1-Methylnaphthalene	16	1.6	40	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
2-Methylnaphthalene	ND	1.5	40		µg/L	10	5/8/2018 7:20:05 PM	W5112
Acetone	ND	8.2	100		µg/L	10	5/8/2018 7:20:05 PM	W5112
Bromobenzene	ND	1.4	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Bromodichloromethane	ND	1.8	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Bromoform	ND	2.1	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Bromomethane	ND	2.6	30		µg/L	10	5/8/2018 7:20:05 PM	W5112
2-Butanone	ND	11	100		µg/L	10	5/8/2018 7:20:05 PM	W5112
Carbon disulfide	ND	4.0	100		µg/L	10	5/8/2018 7:20:05 PM	W5112
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Chlorobenzene	ND	1.1	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Chloroethane	ND	2.3	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
Chloroform	ND	4.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Chloromethane	ND	2.9	30		µg/L	10	5/8/2018 7:20:05 PM	W5112
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
cis-1,2-DCE	16	2.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
Dibromochloromethane	ND	0.72	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Dibromomethane	ND	0.91	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1-Dichloroethane	33	4.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1-Dichloroethene	11	0.81	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
2-Hexanone	ND	6.6	100		µg/L	10	5/8/2018 7:20:05 PM	W5112
Isopropylbenzene	15	0.51	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
4-Isopropyltoluene	1.1	0.96	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/8/2018 7:20:05 PM	W5112
Methylene Chloride	ND	1.1	30		µg/L	10	5/8/2018 7:20:05 PM	W5112
n-Butylbenzene	4.1	1.3	30	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
n-Propylbenzene	45	0.74	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
sec-Butylbenzene	2.4	1.1	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
Styrene	ND	1.6	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,1,2-Trichloroethane	1.6	1.4	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
Trichloroethene (TCE)	1.8	1.1	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/8/2018 7:20:05 PM	W5112
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/8/2018 7:20:05 PM	W5112
Vinyl chloride	6.3	1.8	10	J	µg/L	10	5/8/2018 7:20:05 PM	W5112
Xylenes, Total	120	3.2	15		µg/L	10	5/8/2018 7:20:05 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:15:00 PM
Lab ID: 1805201-007 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	10	5/8/2018 7:20:05 PM	W5112
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	10	5/8/2018 7:20:05 PM	W5112
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	10	5/8/2018 7:20:05 PM	W5112
Surr: Toluene-d8	96.3	0	70-130		%Rec	10	5/8/2018 7:20:05 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/4/2018 5:46:49 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 5:46:49 AM	37933
Surr: DNOP	123	0	76.7-135		%Rec	1	5/4/2018 5:46:49 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.028	0.021	0.050	J	mg/L	1	5/6/2018 2:54:12 AM	G51065
Surr: BFB	86.2	0	69.3-150		%Rec	1	5/6/2018 2:54:12 AM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/3/2018 1:22:31 PM	R51040
Chloride	4800	15	250		mg/L	500	5/21/2018 12:39:11 PM	R51436
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	5/3/2018 1:35:24 PM	R51040
Bromide	1.6	0.13	0.50		mg/L	5	5/3/2018 1:22:31 PM	R51040
Nitrogen, Nitrate (As N)	2.3	0.033	0.50		mg/L	5	5/3/2018 1:22:31 PM	R51040
Phosphorus, Orthophosphate (As P)	0.75	0.46	2.5	J	mg/L	5	5/3/2018 1:22:31 PM	R51040
Sulfate	450	100	250		mg/L	500	5/21/2018 12:39:11 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.091	0.00099	0.0020		mg/L	1	5/18/2018 11:59:52 AM	A51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 11:59:52 AM	A51375
Calcium	450	0.78	10		mg/L	10	5/18/2018 1:44:52 PM	A51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 11:59:52 AM	A51375
Copper	0.0084	0.0032	0.0060		mg/L	1	5/18/2018 11:59:52 AM	A51375
Iron	0.034	0.016	0.020		mg/L	1	5/18/2018 11:59:52 AM	A51375
Magnesium	98	0.25	1.0		mg/L	1	5/18/2018 11:59:52 AM	A51375
Manganese	0.033	0.00039	0.0020		mg/L	1	5/18/2018 11:59:52 AM	A51375
Potassium	14	0.11	1.0		mg/L	1	5/18/2018 11:59:52 AM	A51375
Silver	0.0058	0.0018	0.0050		mg/L	1	5/18/2018 11:59:52 AM	A51375
Sodium	2800	8.2	50		mg/L	50	5/23/2018 3:01:02 PM	C51452
Zinc	0.0099	0.0021	0.010	J	mg/L	1	5/18/2018 11:59:52 AM	A51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.14	0.0010	0.0020		mg/L	1	5/21/2018 3:04:13 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 3:04:13 PM	38078
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 3:04:13 PM	38078
Copper	0.0092	0.0041	0.0060		mg/L	1	5/21/2018 3:04:13 PM	38078
Iron	3.4	0.051	0.10	*	mg/L	5	5/22/2018 3:48:42 PM	38078
Manganese	0.69	0.0011	0.0020	*	mg/L	1	5/22/2018 3:46:38 PM	38078
Silver	0.0074	0.0012	0.0050		mg/L	1	5/21/2018 3:04:13 PM	38078
Zinc	0.014	0.0033	0.010		mg/L	1	5/21/2018 3:04:13 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0050	0.0021	0.0050	J	mg/L	5	5/16/2018 3:25:24 PM	A51316
Lead	ND	0.0017	0.0050		mg/L	10	5/16/2018 3:42:11 PM	A51316
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:25:24 PM	A51316
Uranium	0.034	0.00096	0.0050	*	mg/L	10	5/16/2018 3:42:11 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0080	0.0041	0.010	J	mg/L	10	5/15/2018 11:36:06 AM	38078
Lead	0.0029	0.0023	0.0050	J	mg/L	10	5/15/2018 11:36:06 AM	38078
Selenium	ND	0.0098	0.010		mg/L	10	5/15/2018 11:36:06 AM	38078
Uranium	0.037	0.00068	0.0050	*	mg/L	10	5/15/2018 11:36:06 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000037	0.00020	J	mg/L	1	5/15/2018 3:33:25 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzoic acid	ND	6.3	20		µg/L	1	5/10/2018 6:55:51 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 6:55:51 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 6:55:51 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 6:55:51 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 6:55:51 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 6:55:51 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 6:55:51 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 6:55:51 PM	37947
Surr: 2-Fluorophenol	2.85	0	15-114	S	%Rec	1	5/10/2018 6:55:51 PM	37947
Surr: Phenol-d5	7.43	0	15-97.9	S	%Rec	1	5/10/2018 6:55:51 PM	37947
Surr: 2,4,6-Tribromophenol	3.28	0	15-161	S	%Rec	1	5/10/2018 6:55:51 PM	37947
Surr: Nitrobenzene-d5	56.3	0	29.3-120		%Rec	1	5/10/2018 6:55:51 PM	37947
Surr: 2-Fluorobiphenyl	60.2	0	17.5-116		%Rec	1	5/10/2018 6:55:51 PM	37947
Surr: 4-Terphenyl-d14	75.6	0	21-92.2		%Rec	1	5/10/2018 6:55:51 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Methyl tert-butyl ether (MTBE)	25	0.24	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2-Dichloroethane (EDC)	0.53	0.40	1.0	J	µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Acetone	ND	0.82	10		µg/L	1	5/8/2018 4:53:00 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 4:53:00 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 4:53:00 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1-Dichloroethane	1.5	0.40	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1-Dichloroethene	0.42	0.081	1.0	J	µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 4:53:00 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 4:53:00 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 4:53:00 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 4:53:00 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018 4:50:00 PM
Lab ID: 1805201-008 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	96.1	0	70-130		%Rec	1	5/8/2018 4:53:00 PM	W5112
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/8/2018 4:53:00 PM	W5112
Surr: Dibromofluoromethane	96.4	0	70-130		%Rec	1	5/8/2018 4:53:00 PM	W5112
Surr: Toluene-d8	93.6	0	70-130		%Rec	1	5/8/2018 4:53:00 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.64	0.63	1.0	J	mg/L	1	5/4/2018 6:08:42 AM	37933
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/4/2018 6:08:42 AM	37933
Surr: DNOP	126	0	76.7-135		%Rec	1	5/4/2018 6:08:42 AM	37933
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/6/2018 3:17:37 AM	G51065
Surr: BFB	86.5	0	69.3-150		%Rec	1	5/6/2018 3:17:37 AM	G51065
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.86	0.15	0.50		mg/L	5	5/8/2018 2:49:12 PM	R51131
Chloride	180	0.59	10		mg/L	20	5/8/2018 3:01:36 PM	R51131
Bromide	0.91	0.13	0.50		mg/L	5	5/8/2018 2:49:12 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/8/2018 2:49:12 PM	R51131
Sulfate	460	4.1	10		mg/L	20	5/8/2018 3:01:36 PM	R51131
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/21/2018 2:09:13 PM	R51436
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.022	0.00099	0.0020		mg/L	1	5/18/2018 12:02:09 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:02:09 PM	B51375
Calcium	62	0.078	1.0		mg/L	1	5/18/2018 12:02:09 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:02:09 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:02:09 PM	B51375
Iron	0.025	0.016	0.020		mg/L	1	5/18/2018 12:02:09 PM	B51375
Magnesium	8.9	0.25	1.0		mg/L	1	5/18/2018 12:02:09 PM	B51375
Manganese	0.38	0.00039	0.0020	*	mg/L	1	5/18/2018 12:02:09 PM	B51375
Potassium	0.25	0.11	1.0	J	mg/L	1	5/18/2018 12:02:09 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:02:09 PM	B51375
Sodium	480	0.82	5.0		mg/L	5	5/23/2018 3:03:10 PM	C51452
Zinc	0.0058	0.0021	0.010	J	mg/L	1	5/18/2018 12:02:09 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	5/21/2018 3:06:12 PM	38078
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 3:06:12 PM	38078
Chromium	0.0042	0.0018	0.0060	J	mg/L	1	5/21/2018 3:06:12 PM	38078
Copper	0.0044	0.0041	0.0060	J	mg/L	1	5/21/2018 3:06:12 PM	38078
Iron	4.3	0.051	0.10	*	mg/L	5	5/22/2018 3:52:50 PM	38078
Manganese	0.55	0.0011	0.0020	*	mg/L	1	5/22/2018 3:50:50 PM	38078
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 3:06:12 PM	38078
Zinc	0.0097	0.0033	0.010	J	mg/L	1	5/21/2018 3:06:12 PM	38078
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0015	0.00042	0.0010		mg/L	1	5/14/2018 7:08:14 PM	C51261

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:08:14 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 7:08:14 PM	C51261
Uranium	0.0083	0.000096	0.00050		mg/L	1	5/14/2018 7:08:14 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0023	0.0021	0.0050	J	mg/L	5	5/15/2018 11:38:29 AM	38078
Lead	0.0020	0.00023	0.00050		mg/L	1	5/15/2018 10:22:53 AM	38078
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:38:29 AM	38078
Uranium	0.0086	0.000068	0.00050		mg/L	1	5/15/2018 10:22:53 AM	38078
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000080	0.000037	0.00020	J	mg/L	1	5/15/2018 3:35:39 PM	38118
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Acenaphthylene	ND	6.2	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Aniline	ND	6.2	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Anthracene	ND	5.7	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Azobenzene	ND	6.7	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzoic acid	ND	6.3	20		µg/L	1	5/10/2018 7:24:40 PM	37947
Benzyl alcohol	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Carbazole	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Chloroaniline	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Chlorophenol	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Chrysene	ND	6.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Dibenzofuran	ND	6.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Diethyl phthalate	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Fluoranthene	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Fluorene	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Hexachloroethane	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Isophorone	ND	6.2	10		µg/L	1	5/10/2018 7:24:40 PM	37947
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Methylphenol	ND	6.3	10		µg/L	1	5/10/2018 7:24:40 PM	37947
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/10/2018 7:24:40 PM	37947
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Naphthalene	ND	5.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Nitroaniline	ND	5.9	10		µg/L	1	5/10/2018 7:24:40 PM	37947
3-Nitroaniline	ND	6.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Nitroaniline	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Nitrobenzene	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2-Nitrophenol	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
4-Nitrophenol	ND	5.6	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Pentachlorophenol	ND	5.3	20		µg/L	1	5/10/2018 7:24:40 PM	37947
Phenanthrene	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Phenol	ND	6.0	10		µg/L	1	5/10/2018 7:24:40 PM	37947

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Pyridine	ND	5.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/10/2018 7:24:40 PM	37947
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/10/2018 7:24:40 PM	37947
Surr: 2-Fluorophenol	45.2	0	15-114		%Rec	1	5/10/2018 7:24:40 PM	37947
Surr: Phenol-d5	31.8	0	15-97.9		%Rec	1	5/10/2018 7:24:40 PM	37947
Surr: 2,4,6-Tribromophenol	87.1	0	15-161		%Rec	1	5/10/2018 7:24:40 PM	37947
Surr: Nitrobenzene-d5	76.8	0	29.3-120		%Rec	1	5/10/2018 7:24:40 PM	37947
Surr: 2-Fluorobiphenyl	78.3	0	17.5-116		%Rec	1	5/10/2018 7:24:40 PM	37947
Surr: 4-Terphenyl-d14	123	0	21-92.2	S	%Rec	1	5/10/2018 7:24:40 PM	37947
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Methyl tert-butyl ether (MTBE)	7.1	0.24	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Acetone	5.0	0.82	10	J	µg/L	1	5/8/2018 5:22:42 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Bromomethane	ND	0.26	3.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 5:22:42 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 5:22:42 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 5:22:42 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 5:22:42 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 5:22:42 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 5:22:42 PM	W5112
Surr: 1,2-Dichloroethane-d4	95.4	0	70-130		%Rec	1	5/8/2018 5:22:42 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date: 5/1/2018
Lab ID: 1805201-009
Matrix: AQUEOUS
Received Date: 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/8/2018 5:22:42 PM	W5112
Surr: Dibromofluoromethane	95.7	0	70-130		%Rec	1	5/8/2018 5:22:42 PM	W5112
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	5/8/2018 5:22:42 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1805201-010 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.021	0.050		mg/L	1	5/6/2018 3:40:59 AM	G51065
Surr: BFB	89.4	0	69.3-150		%Rec	1	5/6/2018 3:40:59 AM	G51065
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Toluene	ND	0.064	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Naphthalene	ND	0.11	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Acetone	ND	0.82	10		µg/L	1	5/8/2018 1:25:44 PM	W5112
Bromobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Bromoform	ND	0.21	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Bromomethane	0.27	0.26	3.0	J	µg/L	1	5/8/2018 1:25:44 PM	W5112
2-Butanone	ND	1.1	10		µg/L	1	5/8/2018 1:25:44 PM	W5112
Carbon disulfide	ND	0.40	10		µg/L	1	5/8/2018 1:25:44 PM	W5112
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Chloroethane	ND	0.23	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Chloroform	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Chloromethane	ND	0.29	3.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Dibromomethane	ND	0.091	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 GW Sampling MKTF
Collection Date:
Lab ID: 1805201-010 **Matrix:** AQUEOUS **Received Date:** 5/3/2018 9:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
2-Hexanone	ND	0.66	10		µg/L	1	5/8/2018 1:25:44 PM	W5112
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/8/2018 1:25:44 PM	W5112
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Styrene	ND	0.16	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/8/2018 1:25:44 PM	W5112
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/8/2018 1:25:44 PM	W5112
Surr: 1,2-Dichloroethane-d4	93.0	0	70-130		%Rec	1	5/8/2018 1:25:44 PM	W5112
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/8/2018 1:25:44 PM	W5112
Surr: Dibromofluoromethane	93.8	0	70-130		%Rec	1	5/8/2018 1:25:44 PM	W5112
Surr: Toluene-d8	94.9	0	70-130		%Rec	1	5/8/2018 1:25:44 PM	W5112

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.47	1.0	0.5000	0	94.7	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	96.0	50	150			J
Iron	0.027	0.020	0.02000	0	135	50	150			
Magnesium	0.44	1.0	0.5000	0	88.3	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.49	1.0	0.5000	0	98.5	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Zinc	0.0070	0.010	0.005000	0	140	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.7	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	94.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	86.5	50	150			J
Calcium	0.49	1.0	0.5000	0	97.2	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Copper	0.0069	0.0060	0.006000	0	116	50	150			
Iron	0.025	0.020	0.02000	0	125	50	150			
Magnesium	0.45	1.0	0.5000	0	90.7	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Potassium	0.50	1.0	0.5000	0	100	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	0.0061	0.010	0.005000	0	123	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	98.2	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Magnesium	49	1.0	50.00	0	98.2	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Zinc	0.49	0.010	0.5000	0	97.9	85	115			

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.3	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51516**			RunNo: **51516**					
Prep Date:		Analysis Date: **5/24/2018**			SeqNo: **1679020**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		0.50	1.0	0.5000	0	99.4	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51516**			RunNo: **51516**					
Prep Date:		Analysis Date: **5/24/2018**			SeqNo: **1679021**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		51	1.0	50.00	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB-38078** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **PBW** Batch ID: **38078** RunNo: **51355**

Prep Date: **5/11/2018** Analysis Date: **5/17/2018** SeqNo: **1671239** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38078** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **BatchQC** Batch ID: **38078** RunNo: **51355**

Prep Date: **5/11/2018** Analysis Date: **5/17/2018** SeqNo: **1671243** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	85.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Chromium	0.0061	0.0060	0.006000	0	101	50	150			
Copper	0.0050	0.0060	0.006000	0	83.8	50	150			J
Iron	0.019	0.020	0.02000	0	96.8	50	150			J
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Silver	0.0053	0.0050	0.005000	0	107	50	150			
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID **LCS-38078** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **LCSW** Batch ID: **38078** RunNo: **51355**

Prep Date: **5/11/2018** Analysis Date: **5/17/2018** SeqNo: **1671244** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.49	0.0060	0.5000	0	97.4	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.52	0.020	0.5000	0	105	85	115			
Manganese	0.50	0.0020	0.5000	0	99.0	85	115			
Silver	0.11	0.0050	0.1000	0	110	85	115			
Zinc	0.50	0.010	0.5000	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666235** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666236** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.6	50	150			J
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J
Selenium	0.00095	0.0010	0.001000	0	95.4	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.3	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	96.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666266** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666266** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.7	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.3	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	92.4	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.011	0.00050	0.01250	0	90.5	85	115			

Sample ID **1805201-004EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-29**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666271** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0010	0.02500	0.001462	117	70	130			
Lead	0.010	0.00050	0.01250	0	81.8	70	130			
Selenium	0.028	0.0010	0.02500	0	114	70	130			
Uranium	0.020	0.00050	0.01250	0.007851	99.1	70	130			

Sample ID **1805201-004EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-29**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666272** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0010	0.02500	0.001462	117	70	130	0.266	20	
Lead	0.010	0.00050	0.01250	0	82.6	70	130	0.945	20	
Selenium	0.028	0.0010	0.02500	0	114	70	130	0.105	20	
Uranium	0.021	0.00050	0.01250	0.007851	105	70	130	3.36	20	

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID	**MB-38078**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38078**	RunNo:	**51277**					
Prep Date:	**5/11/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666892**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38078**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38078**	RunNo:	**51277**					
Prep Date:	**5/11/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666893**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.3	50	150			J
Selenium	0.0010	0.0010	0.001000	0	99.8	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.4	50	150			J

Sample ID	**MSLCS-38078**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38078**	RunNo:	**51277**					
Prep Date:	**5/11/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666894**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	97.4	85	115			
Uranium	0.012	0.00050	0.01250	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID	**MB-38118**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38118**	RunNo:	**51292**					
Prep Date:	**5/15/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667222**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000066	0.00020								J

Sample ID	**LCS-38118**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38118**	RunNo:	**51292**					
Prep Date:	**5/15/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667223**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51040**	RunNo: **51040**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1657292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.34	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.18	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51040**	RunNo: **51040**
Prep Date:	Analysis Date: **5/3/2018**	SeqNo: **1657293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Chloride	4.5	0.50	5.000	0	90.6	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.4	90	110			
Bromide	2.3	0.10	2.500	0	93.4	90	110			
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	93.2	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.2	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51131**	RunNo: **51131**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661226** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.12	0.50								J
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.11	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51131**	RunNo: **51131**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661227** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	94.3	90	110			
Bromide	2.5	0.10	2.500	0	98.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51436**	RunNo: **51436**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1674323** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51436**	RunNo: **51436**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1674324** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.5	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID	**MB-37961**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**37961**	RunNo:	**51103**					
Prep Date:	**5/7/2018**	Analysis Date:	**5/7/2018**	SeqNo:	**1660495**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-37961**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**37961**	RunNo:	**51103**					
Prep Date:	**5/7/2018**	Analysis Date:	**5/7/2018**	SeqNo:	**1660496**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.092	0.010	0.1000	0	92.0	70	130			

Sample ID	**1805201-002GMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB03**	Batch ID:	**37961**	RunNo:	**51103**					
Prep Date:	**5/7/2018**	Analysis Date:	**5/7/2018**	SeqNo:	**1660500**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.086	0.0093	0.09309	0	92.3	26.5	132			

Sample ID	**1805201-002GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB03**	Batch ID:	**37961**	RunNo:	**51103**					
Prep Date:	**5/7/2018**	Analysis Date:	**5/7/2018**	SeqNo:	**1660501**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.088	0.0093	0.09333	0	94.8	26.5	132	2.88	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **1805201-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB03**	Batch ID: **37933**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/4/2018**	SeqNo: **1657007** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	82.8	143			
Surr: DNOP	0.61		0.5000		122	76.7	135			

Sample ID **1805201-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB03**	Batch ID: **37933**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/4/2018**	SeqNo: **1657008** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	109	82.8	143	3.20	20	
Surr: DNOP	0.64		0.5000		128	76.7	135	0	0	

Sample ID **LCS-37933**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **37933**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/4/2018**	SeqNo: **1657026** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	70	130			
Surr: DNOP	0.60		0.5000		119	76.7	135			

Sample ID **MB-37933**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **37933**	RunNo: **50978**
Prep Date: **5/3/2018**	Analysis Date: **5/4/2018**	SeqNo: **1657027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		121	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **B29**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/5/2018**	SeqNo: **1658579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		87.9	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/5/2018**	SeqNo: **1658580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	105	79.5	127			
Surr: BFB	20		20.00		99.4	69.3	150			

Sample ID **1805201-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/6/2018**	SeqNo: **1658588** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	49	2.5	25.00	23.03	102	52.5	149			
Surr: BFB	1100		1000		110	69.3	150			

Sample ID **1805201-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **G51065**	RunNo: **51065**
Prep Date:	Analysis Date: **5/6/2018**	SeqNo: **1658589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	48	2.5	25.00	23.03	99.5	52.5	149	1.29	20	
Surr: BFB	1200		1000		116	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660950** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660950** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.6	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660951** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.3	70	130			
Toluene	19	1.0	20.00	0	92.6	70	130			
Chlorobenzene	17	1.0	20.00	0	87.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660951** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	94.7	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID **1805201-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-30**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660959** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	60.5	137			
Toluene	18	1.0	20.00	0	90.2	70	130			
Chlorobenzene	18	1.0	20.00	0	88.2	70	130			
1,1-Dichloroethene	20	1.0	20.00	1.993	91.5	70	130			
Trichloroethene (TCE)	18	1.0	20.00	1.996	80.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.4	70	130			
Surr: Toluene-d8	9.5		10.00		94.9	70	130			

Sample ID **1805201-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-30**	Batch ID: **W51125**	RunNo: **51125**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660960** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	60.5	137	1.62	20	
Toluene	18	1.0	20.00	0	89.6	70	130	0.568	20	
Chlorobenzene	17	1.0	20.00	0	86.7	70	130	1.72	20	
1,1-Dichloroethene	20	1.0	20.00	1.993	88.8	70	130	2.66	20	
Trichloroethene (TCE)	19	1.0	20.00	1.996	82.6	70	130	2.39	20	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		96.5	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **lcs-37947**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663208** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	40.5	108			
2-Chlorophenol	150	10	200.0	0	74.3	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	68.3	24.7	93.7			
2,4-Dinitrotoluene	83	10	100.0	0	83.2	35.6	91.4			
N-Nitrosodi-n-propylamine	81	10	100.0	0	81.4	41.6	114			
4-Nitrophenol	140	10	200.0	0	71.4	20.7	74.3			
Pentachlorophenol	150	20	200.0	0	75.9	25.3	98.5			
Phenol	120	10	200.0	0	61.6	20.9	75.1			
Pyrene	78	10	100.0	0	78.5	45.6	108			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.0	30.3	106			
Surr: 2-Fluorophenol	140		200.0		67.5	15	114			
Surr: Phenol-d5	120		200.0		59.6	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		91.4	15	161			
Surr: Nitrobenzene-d5	75		100.0		75.4	29.3	120			
Surr: 2-Fluorobiphenyl	79		100.0		79.2	17.5	116			
Surr: 4-Terphenyl-d14	110		100.0		108	21	92.2			S

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	14	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **mb-37947**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **37947**	RunNo: **51189**	
Prep Date: **5/4/2018**	Analysis Date: **5/10/2018**	SeqNo: **1663209**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **mb-37947** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **37947** RunNo: **51189**
Prep Date: **5/4/2018** Analysis Date: **5/10/2018** SeqNo: **1663209** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	92		200.0		45.9	15	114			
Surr: Phenol-d5	62		200.0		31.2	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		90.8	15	161			
Surr: Nitrobenzene-d5	64		100.0		64.0	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	17.5	116			
Surr: 4-Terphenyl-d14	64		100.0		64.3	21	92.2			

Sample ID **lcs-38139** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **38139** RunNo: **51373**
Prep Date: **5/16/2018** Analysis Date: **5/18/2018** SeqNo: **1672672** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.4	15	114			
Surr: Phenol-d5	120		200.0		61.5	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		96.8	15	161			
Surr: Nitrobenzene-d5	84		100.0		84.0	29.3	120			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		77.1	21	92.2			

Sample ID **mb-38139** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **38139** RunNo: **51373**
Prep Date: **5/16/2018** Analysis Date: **5/18/2018** SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805201**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 GW Sampling MKTF

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.9	15	114			
Surr: Phenol-d5	110		200.0		52.9	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.1	15	161			
Surr: Nitrobenzene-d5	72		100.0		72.3	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		72.9	17.5	116			
Surr: 4-Terphenyl-d14	75		100.0		75.2	21	92.2			

Sample ID **lcsd-38139**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38139**	RunNo: **51485**
Prep Date: **5/16/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676998** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	190		285.7		67.7	15	114	0	0	
Surr: Phenol-d5	160		285.7		54.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	310		285.7		110	15	161	0	0	
Surr: Nitrobenzene-d5	140		142.9		97.1	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	140		142.9		98.2	17.5	116	0	0	
Surr: 4-Terphenyl-d14	110		142.9		78.6	21	92.2	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1805201 RcptNo: 1

Received By: Isaiah Ortiz 5/3/2018 9:30:00 AM IG

Completed By: Anne Thorne 5/3/2018 10:05:09 AM Anne Thorne

Reviewed By: ENM 5/3/18
LAT. IO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JMD

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

CUSTODY SEALS ON ALL SAMPLE CONTAINERS/at 5/3/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			
2	0.4	Good	Yes			
3	0.6	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No AT 05/03/18

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1000	H_2O	EB03	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	-002					X											
				1 Liter Amber - 1	Neat	-003											X					
				250 ml Amber-1	Neat	-004			X													
				250 ml Plastic-1	HNO_3	-005												X				
				125 ml Plastic-1	HNO_3	-006												X	X			
				125 ml Plastic-1	H_2SO_4	-007													X			
				125 ml Plastic-1	Neat	-008													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		I. Ont (Courier)	5/3/18	9:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

cooler #1 - 0.1
#2 - 0.4
#3 - 0.6 AT 05/03/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1040	H_2O	FB03	40ml VOA-5	HCl	002			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -1	Neat	002											X					
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	002												X				
				125 ml Plastic-1	HNO_3	002												X	X			
				125 ml Plastic-1	H_2SO_4	002													X			
				125 ml Plastic-1	Neat	002													X			

Analysis Request

Date	Time	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
			I.Ort	5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1110	H_2O	MKTF-30	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -2	Neat	003											X					
				250 ml Amber-1	Neat	004			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	007													X			
				125 ml Plastic-1	Neat	008													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
				5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1235	H_2O	MKTF-29	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -1	Neat	003											X					
				250 ml Amber-1	Neat	004			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	007													X			
				125 ml Plastic-1	Neat	008													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
				5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
						Analysis Request																
5/1/18	1340	H_2O	MKTF- 28	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber -1	Neat	-005											X					
				250 ml Amber-1	Neat	-005			X													
				250 ml Plastic-1	HNO_3	-005												X				
				125 ml Plastic-1	HNO_3	-005												X	X			
				125 ml Plastic-1	H_2SO_4	-005													X			
				125 ml Plastic-1	Neat	-005													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
				5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1540	H_2O	MKTF-24	40ml VOA-5	HCl	006			X							X						
				40ml VOA-3	$Na_2S_2O_3$	006					X											
				1 Liter Amber -1	Neat	006											X					
				250 ml Amber-1	Neat	006			X													
				250 ml Plastic-1	HNO_3	006												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
				5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1615	H_2O	MKTF-02	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	002											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	004												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	007													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier	5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	1650	H_2O	MKTF-27	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber-1	Neat	002											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	004												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	007													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courier		
			J. Cole	5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805201	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/1/18	—	H_2O	DUP03	40ml VOA-5	HCl	-009			X							X						
				1 Liter Amber - 1	Neat	-009											X					
				250 ml Amber-1	Neat	-009			X													
				250 ml Plastic-1	HNO_3	-009												X				
				125 ml Plastic-1	HNO_3	-009												X	X			
				125 ml Plastic-1	H_2SO_4	-009													X			
				125 ml Plastic-1	Neat	-009													X			
5/1/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCL	-010										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/2/18	0700		Courie		
			JOA	5/3/18	930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 08, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling MKTF OrderNo.: 1805275

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805275**
Date Reported: **6/8/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.0	0.63	1.0		mg/L	1	5/8/2018 12:34:21 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 12:34:21 PM	37978
Surr: DNOP	114	0	76.7-135		%Rec	1	5/8/2018 12:34:21 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 11:11:01 AM	R51061
Chloride	7200	15	250		mg/L	500	5/18/2018 1:29:13 PM	R51385
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	5/4/2018 11:23:22 AM	R51061
Bromide	0.52	0.13	0.50		mg/L	5	5/4/2018 11:11:01 AM	R51061
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/4/2018 11:11:01 AM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 11:11:01 AM	R51061
Sulfate	1.3	1.0	2.5	J	mg/L	5	5/4/2018 11:11:01 AM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	31	0.049	0.10	*	mg/L	50	5/18/2018 1:53:37 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:04:14 PM	B51375
Calcium	1200	3.9	50		mg/L	50	5/18/2018 1:53:37 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:04:14 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:04:14 PM	B51375
Iron	46	0.82	1.0	*	mg/L	50	5/18/2018 1:53:37 PM	B51375
Magnesium	370	1.2	5.0		mg/L	5	5/18/2018 1:51:25 PM	B51375
Manganese	17	0.020	0.10	*	mg/L	50	5/18/2018 1:53:37 PM	B51375
Potassium	3.6	0.11	1.0		mg/L	1	5/18/2018 12:04:14 PM	B51375
Silver	0.0080	0.0018	0.0050		mg/L	1	5/18/2018 12:04:14 PM	B51375
Sodium	2600	8.2	50		mg/L	50	5/24/2018 8:00:01 PM	A51516
Zinc	0.0034	0.0021	0.010	J	mg/L	1	5/18/2018 12:04:14 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	33	0.050	0.10	*	mg/L	50	5/22/2018 3:55:01 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/18/2018 1:29:00 AM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:29:00 AM	38107
Copper	0.0075	0.0041	0.0060		mg/L	1	5/18/2018 1:29:00 AM	38107
Iron	53	1.0	2.0	*	mg/L	100	5/22/2018 3:57:07 PM	38107
Manganese	18	0.055	0.10	*	mg/L	50	5/22/2018 3:55:01 PM	38107
Silver	0.0077	0.0012	0.0050		mg/L	1	5/18/2018 1:29:00 AM	38107
Zinc	0.010	0.0033	0.010		mg/L	1	6/6/2018 8:16:37 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.010	0.0042	0.010	*	mg/L	10	5/16/2018 3:44:34 PM	A51316
Lead	ND	0.0017	0.0050		mg/L	10	5/16/2018 3:44:34 PM	A51316
Selenium	ND	0.0076	0.010		mg/L	10	5/16/2018 3:44:34 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/16/2018 3:44:34 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.016	0.0041	0.010	*	mg/L	10	5/15/2018 11:40:53 AM	38107
Lead	0.0044	0.0023	0.0050	J	mg/L	10	5/15/2018 11:40:53 AM	38107
Selenium	ND	0.0098	0.010		mg/L	10	5/15/2018 11:40:53 AM	38107
Uranium	ND	0.00068	0.0050		mg/L	10	5/15/2018 11:40:53 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:12:54 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Acenaphthylene	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Aniline	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Anthracene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Azobenzene	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benz(a)anthracene	ND	26	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzo(a)pyrene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzo(b)fluoranthene	ND	36	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzo(g,h,i)perylene	ND	28	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzo(k)fluoranthene	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzoic acid	130	32	100	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Benzyl alcohol	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Bis(2-chloroethoxy)methane	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Bis(2-chloroethyl)ether	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Bis(2-chloroisopropyl)ether	ND	24	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Bis(2-ethylhexyl)phthalate	ND	40	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Bromophenyl phenyl ether	ND	35	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Butyl benzyl phthalate	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Carbazole	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Chloro-3-methylphenol	ND	28	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Chloroaniline	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Chloronaphthalene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Chlorophenol	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Chlorophenyl phenyl ether	ND	36	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Chrysene	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Di-n-butyl phthalate	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Di-n-octyl phthalate	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Dibenz(a,h)anthracene	ND	28	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Dibenzofuran	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
1,3-Dichlorobenzene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
1,4-Dichlorobenzene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
3,3´-Dichlorobenzidine	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Diethyl phthalate	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Dimethyl phthalate	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4-Dichlorophenol	ND	29	100	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4-Dimethylphenol	70	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4,6-Dinitro-2-methylphenol	ND	27	100	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4-Dinitrophenol	ND	19	100	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4-Dinitrotoluene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,6-Dinitrotoluene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Fluoranthene	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Fluorene	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Hexachlorobenzene	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Hexachlorobutadiene	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Hexachlorocyclopentadiene	ND	20	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Hexachloroethane	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Indeno(1,2,3-cd)pyrene	ND	35	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Isophorone	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
1-Methylnaphthalene	ND	35	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Methylnaphthalene	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Methylphenol	350	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
3+4-Methylphenol	230	27	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
N-Nitrosodi-n-propylamine	ND	31	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
N-Nitrosodimethylamine	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
N-Nitrosodiphenylamine	ND	33	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Naphthalene	44	25	50	JD	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Nitroaniline	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
3-Nitroaniline	ND	34	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Nitroaniline	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Nitrobenzene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2-Nitrophenol	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
4-Nitrophenol	ND	28	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Pentachlorophenol	ND	26	100	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Phenanthrene	ND	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Phenol	660	30	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Pyrene	ND	33	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Pyridine	ND	27	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4,5-Trichlorophenol	ND	29	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
2,4,6-Trichlorophenol	ND	32	50	D	µg/L	1	5/15/2018 12:59:23 PM	38002
Surr: 2-Fluorophenol	17.5	0	15-114	D	%Rec	1	5/15/2018 12:59:23 PM	38002
Surr: Phenol-d5	35.8	0	15-97.9	D	%Rec	1	5/15/2018 12:59:23 PM	38002
Surr: 2,4,6-Tribromophenol	64.5	0	15-161	D	%Rec	1	5/15/2018 12:59:23 PM	38002
Surr: Nitrobenzene-d5	66.8	0	29.3-120	D	%Rec	1	5/15/2018 12:59:23 PM	38002
Surr: 2-Fluorobiphenyl	67.2	0	17.5-116	D	%Rec	1	5/15/2018 12:59:23 PM	38002
Surr: 4-Terphenyl-d14	182	0	21-92.2	SD	%Rec	1	5/15/2018 12:59:23 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	16000	62	1000		µg/L	1E+	5/10/2018 2:40:00 PM	R51191
Toluene	11000	64	1000		µg/L	1E+	5/10/2018 2:40:00 PM	R51191
Ethylbenzene	2400	9.3	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Methyl tert-butyl ether (MTBE)	180	24	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2,4-Trimethylbenzene	790	11	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,3,5-Trimethylbenzene	220	8.7	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Naphthalene	110	11	200	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
1-Methylnaphthalene	50	16	400	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
2-Methylnaphthalene	48	15	400	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
Acetone	ND	82	1000		µg/L	100	5/10/2018 3:05:00 PM	R51191
Bromobenzene	ND	14	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Bromodichloromethane	ND	18	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Bromoform	ND	21	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Bromomethane	ND	26	300		µg/L	100	5/10/2018 3:05:00 PM	R51191
2-Butanone	ND	110	1000		µg/L	100	5/10/2018 3:05:00 PM	R51191
Carbon disulfide	ND	40	1000		µg/L	100	5/10/2018 3:05:00 PM	R51191
Carbon Tetrachloride	ND	11	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Chlorobenzene	ND	11	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Chloroethane	ND	23	200		µg/L	100	5/10/2018 3:05:00 PM	R51191
Chloroform	ND	40	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Chloromethane	ND	29	300		µg/L	100	5/10/2018 3:05:00 PM	R51191
2-Chlorotoluene	ND	40	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
4-Chlorotoluene	ND	40	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
cis-1,2-DCE	ND	20	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	5/10/2018 3:05:00 PM	R51191
Dibromochloromethane	ND	7.2	100		µg/L	100	5/10/2018 3:05:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	9.1	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,3-Dichlorobenzene	ND	15	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,4-Dichlorobenzene	ND	40	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Dichlorodifluoromethane	ND	100	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1-Dichloroethane	75	40	100	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1-Dichloroethene	ND	8.1	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2-Dichloropropane	ND	10	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,3-Dichloropropane	ND	17	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
2,2-Dichloropropane	ND	16	200		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1-Dichloropropene	ND	9.3	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Hexachlorobutadiene	ND	80	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
2-Hexanone	ND	66	1000		µg/L	100	5/10/2018 3:05:00 PM	R51191
Isopropylbenzene	120	5.1	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
4-Isopropyltoluene	16	9.6	100	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/10/2018 3:05:00 PM	R51191
Methylene Chloride	ND	11	300		µg/L	100	5/10/2018 3:05:00 PM	R51191
n-Butylbenzene	21	13	300	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
n-Propylbenzene	170	7.4	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
sec-Butylbenzene	20	11	100	J	µg/L	100	5/10/2018 3:05:00 PM	R51191
Styrene	ND	16	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
tert-Butylbenzene	ND	10	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	5/10/2018 3:05:00 PM	R51191
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
trans-1,2-DCE	ND	18	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,1,2-Trichloroethane	ND	14	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Trichloroethene (TCE)	ND	11	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Trichlorofluoromethane	ND	18	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
1,2,3-Trichloropropane	ND	39	200		µg/L	100	5/10/2018 3:05:00 PM	R51191
Vinyl chloride	ND	18	100		µg/L	100	5/10/2018 3:05:00 PM	R51191
Xylenes, Total	7900	32	150		µg/L	100	5/10/2018 3:05:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	100	5/10/2018 3:05:00 PM	R51191
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	100	5/10/2018 3:05:00 PM	R51191
Surr: Dibromofluoromethane	107	0	70-130		%Rec	100	5/10/2018 3:05:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 12:40:00 PM
Lab ID: 1805275-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	100	5/10/2018 3:05:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	97	1.9	10		mg/L	200	5/8/2018 11:09:57 AM	R51124
Surr: BFB	98.5	0	70-130		%Rec	200	5/8/2018 11:09:57 AM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.9	0.63	1.0		mg/L	1	5/8/2018 4:19:12 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 4:19:12 PM	37978
Surr: DNOP	117	0	76.7-135		%Rec	1	5/8/2018 4:19:12 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 11:36:13 AM	R51061
Chloride	200	0.59	10		mg/L	20	5/4/2018 11:49:06 AM	R51061
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/4/2018 11:36:13 AM	R51061
Bromide	2.2	0.13	0.50		mg/L	5	5/4/2018 11:36:13 AM	R51061
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/4/2018 11:36:13 AM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 11:36:13 AM	R51061
Sulfate	9.8	1.0	2.5		mg/L	5	5/4/2018 11:36:13 AM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.6	0.0049	0.010	*	mg/L	5	5/18/2018 1:55:56 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:06:23 PM	B51375
Calcium	110	0.39	5.0		mg/L	5	5/18/2018 1:55:56 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:06:23 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:06:23 PM	B51375
Iron	2.4	0.082	0.10	*	mg/L	5	5/18/2018 1:55:56 PM	B51375
Magnesium	28	0.25	1.0		mg/L	1	5/18/2018 12:06:23 PM	B51375
Manganese	1.5	0.0020	0.010	*	mg/L	5	5/18/2018 1:55:56 PM	B51375
Potassium	0.64	0.11	1.0	J	mg/L	1	5/18/2018 12:06:23 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:06:23 PM	B51375
Sodium	370	0.82	5.0		mg/L	5	5/23/2018 3:07:24 PM	C51452
Zinc	0.0068	0.0021	0.010	J	mg/L	1	5/18/2018 12:06:23 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	3.0	0.0050	0.010	*	mg/L	5	5/22/2018 3:59:28 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/18/2018 1:31:09 AM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:31:09 AM	38107
Copper	0.0042	0.0041	0.0060	J	mg/L	1	5/18/2018 1:31:09 AM	38107
Iron	5.3	0.10	0.20	*	mg/L	10	5/22/2018 4:01:36 PM	38107
Manganese	1.7	0.0055	0.010	*	mg/L	5	5/22/2018 3:59:28 PM	38107
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/18/2018 1:31:09 AM	38107
Zinc	0.0062	0.0033	0.010	J	mg/L	1	6/6/2018 8:18:49 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.010	0.00042	0.0010	*	mg/L	1	5/14/2018 7:20:18 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:20:18 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 7:20:18 PM	C51261

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0038	0.000096	0.00050		mg/L	1	5/14/2018 7:20:18 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.013	0.00041	0.0010	*	mg/L	1	5/15/2018 10:32:18 AM	38107
Lead	0.0010	0.00023	0.00050		mg/L	1	5/15/2018 10:32:18 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:32:18 AM	38107
Uranium	0.0040	0.000068	0.00050		mg/L	1	5/15/2018 10:32:18 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:15:10 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 1:27:08 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Carbazole	12	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 1:27:08 PM	38002
1-Methylnaphthalene	94	7.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Methylnaphthalene	97	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 1:27:08 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 1:27:08 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Naphthalene	150	5.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 1:27:08 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 1:27:08 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 1:27:08 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 1:27:08 PM	38002
Surr: 2-Fluorophenol	25.8	0	15-114		%Rec	1	5/15/2018 1:27:08 PM	38002
Surr: Phenol-d5	30.4	0	15-97.9		%Rec	1	5/15/2018 1:27:08 PM	38002
Surr: 2,4,6-Tribromophenol	68.3	0	15-161		%Rec	1	5/15/2018 1:27:08 PM	38002
Surr: Nitrobenzene-d5	54.4	0	29.3-120		%Rec	1	5/15/2018 1:27:08 PM	38002
Surr: 2-Fluorobiphenyl	62.5	0	17.5-116		%Rec	1	5/15/2018 1:27:08 PM	38002
Surr: 4-Terphenyl-d14	53.8	0	21-92.2		%Rec	1	5/15/2018 1:27:08 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1100	6.2	100		µg/L	100	5/10/2018 3:29:00 PM	R51191
Toluene	16	0.64	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Ethylbenzene	740	0.93	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Methyl tert-butyl ether (MTBE)	2300	24	100		µg/L	100	5/10/2018 3:29:00 PM	R51191
1,2,4-Trimethylbenzene	520	1.1	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,3,5-Trimethylbenzene	86	0.87	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Naphthalene	320	1.1	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
1-Methylnaphthalene	190	1.6	40		µg/L	10	5/10/2018 3:53:00 PM	R51191
2-Methylnaphthalene	170	1.5	40		µg/L	10	5/10/2018 3:53:00 PM	R51191
Acetone	ND	8.2	100		µg/L	10	5/10/2018 3:53:00 PM	R51191
Bromobenzene	ND	1.4	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Bromodichloromethane	ND	1.8	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Bromoform	ND	2.1	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Bromomethane	ND	2.6	30		µg/L	10	5/10/2018 3:53:00 PM	R51191
2-Butanone	ND	11	100		µg/L	10	5/10/2018 3:53:00 PM	R51191
Carbon disulfide	ND	4.0	100		µg/L	10	5/10/2018 3:53:00 PM	R51191
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Chlorobenzene	ND	1.1	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Chloroethane	ND	2.3	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
Chloroform	ND	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Chloromethane	ND	2.9	30		µg/L	10	5/10/2018 3:53:00 PM	R51191
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
cis-1,2-DCE	9.5	2.0	10	J	µg/L	10	5/10/2018 3:53:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
Dibromochloromethane	ND	0.72	10		µg/L	10	5/10/2018 3:53:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.91	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1-Dichloroethane	14	4.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1-Dichloroethene	20	0.81	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
2-Hexanone	ND	6.6	100		µg/L	10	5/10/2018 3:53:00 PM	R51191
Isopropylbenzene	27	0.51	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
4-Isopropyltoluene	4.8	0.96	10	J	µg/L	10	5/10/2018 3:53:00 PM	R51191
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/10/2018 3:53:00 PM	R51191
Methylene Chloride	ND	1.1	30		µg/L	10	5/10/2018 3:53:00 PM	R51191
n-Butylbenzene	7.8	1.3	30	J	µg/L	10	5/10/2018 3:53:00 PM	R51191
n-Propylbenzene	58	0.74	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
sec-Butylbenzene	4.7	1.1	10	J	µg/L	10	5/10/2018 3:53:00 PM	R51191
Styrene	ND	1.6	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Trichloroethene (TCE)	1.7	1.1	10	J	µg/L	10	5/10/2018 3:53:00 PM	R51191
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/10/2018 3:53:00 PM	R51191
Vinyl chloride	ND	1.8	10		µg/L	10	5/10/2018 3:53:00 PM	R51191
Xylenes, Total	890	3.2	15		µg/L	10	5/10/2018 3:53:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	10	5/10/2018 3:53:00 PM	R51191
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	10	5/10/2018 3:53:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	10	5/10/2018 3:53:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:15:00 PM
Lab ID: 1805275-002 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	113	0	70-130		%Rec	10	5/10/2018 3:53:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	12	0.19	1.0		mg/L	20	5/8/2018 12:42:37 PM	R51124
Surr: BFB	89.0	0	70-130		%Rec	20	5/8/2018 12:42:37 PM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.5	0.63	1.0		mg/L	1	5/8/2018 4:43:12 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 4:43:12 PM	37978
Surr: DNOP	116	0	76.7-135		%Rec	1	5/8/2018 4:43:12 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 12:01:57 PM	R51061
Chloride	850	2.9	50		mg/L	100	5/18/2018 1:42:05 PM	R51385
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/4/2018 12:01:57 PM	R51061
Bromide	1.0	0.13	0.50		mg/L	5	5/4/2018 12:01:57 PM	R51061
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/4/2018 12:01:57 PM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 12:01:57 PM	R51061
Sulfate	1.4	1.0	2.5	J	mg/L	5	5/4/2018 12:01:57 PM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.5	0.0049	0.010	*	mg/L	5	5/18/2018 1:58:17 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:08:20 PM	B51375
Calcium	150	0.39	5.0		mg/L	5	5/18/2018 1:58:17 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:08:20 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:08:20 PM	B51375
Iron	6.2	0.16	0.20	*	mg/L	10	5/18/2018 2:00:28 PM	B51375
Magnesium	46	0.25	1.0		mg/L	1	5/18/2018 12:08:20 PM	B51375
Manganese	3.3	0.0020	0.010	*	mg/L	5	5/18/2018 1:58:17 PM	B51375
Potassium	0.99	0.11	1.0	J	mg/L	1	5/18/2018 12:08:20 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:08:20 PM	B51375
Sodium	810	1.6	10		mg/L	10	5/23/2018 3:09:45 PM	C51452
Zinc	0.0091	0.0021	0.010	J	mg/L	1	5/18/2018 12:08:20 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	3.0	0.0050	0.010	*	mg/L	5	5/22/2018 4:04:02 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/18/2018 1:33:09 AM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:33:09 AM	38107
Copper	0.0054	0.0041	0.0060	J	mg/L	1	5/18/2018 1:33:09 AM	38107
Iron	7.8	0.10	0.20	*	mg/L	10	5/22/2018 4:06:13 PM	38107
Manganese	3.8	0.0055	0.010	*	mg/L	5	5/22/2018 4:04:02 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:33:09 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	6/6/2018 8:20:50 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.015	0.0021	0.0050	*	mg/L	5	5/16/2018 3:30:09 PM	A51316
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:23:19 PM	C51261
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 3:30:09 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0045	0.000096	0.00050		mg/L	1	5/14/2018 7:23:19 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	5/15/2018 11:47:55 AM	38107
Lead	ND	0.0011	0.0025		mg/L	5	5/15/2018 11:47:55 AM	38107
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:47:55 AM	38107
Uranium	0.0042	0.00034	0.0025		mg/L	5	5/15/2018 11:47:55 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:17:27 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Aniline	12	6.2	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Benzoic acid	16	6.3	20	J	µg/L	1	5/15/2018 1:55:11 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4-Dimethylphenol	33	5.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 1:55:11 PM	38002
1-Methylnaphthalene	9.9	7.0	10	J	µg/L	1	5/15/2018 1:55:11 PM	38002
2-Methylnaphthalene	9.1	6.3	10	J	µg/L	1	5/15/2018 1:55:11 PM	38002
2-Methylphenol	120	6.3	10		µg/L	1	5/15/2018 1:55:11 PM	38002
3+4-Methylphenol	150	5.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 1:55:11 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Naphthalene	39	5.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 1:55:11 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 1:55:11 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Phenol	52	6.0	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 1:55:11 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 1:55:11 PM	38002
Surr: 2-Fluorophenol	13.6	0	15-114	S	%Rec	1	5/15/2018 1:55:11 PM	38002
Surr: Phenol-d5	26.0	0	15-97.9		%Rec	1	5/15/2018 1:55:11 PM	38002
Surr: 2,4,6-Tribromophenol	57.2	0	15-161		%Rec	1	5/15/2018 1:55:11 PM	38002
Surr: Nitrobenzene-d5	51.0	0	29.3-120		%Rec	1	5/15/2018 1:55:11 PM	38002
Surr: 2-Fluorobiphenyl	53.5	0	17.5-116		%Rec	1	5/15/2018 1:55:11 PM	38002
Surr: 4-Terphenyl-d14	48.8	0	21-92.2		%Rec	1	5/15/2018 1:55:11 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	13000	12	200		µg/L	200	5/10/2018 4:18:00 PM	R51191
Toluene	12000	13	200		µg/L	200	5/10/2018 4:18:00 PM	R51191
Ethylbenzene	1200	1.9	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Methyl tert-butyl ether (MTBE)	75	4.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2,4-Trimethylbenzene	500	2.3	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,3,5-Trimethylbenzene	94	1.7	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	2.6	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Naphthalene	100	2.3	40		µg/L	20	5/10/2018 4:42:00 PM	R51191
1-Methylnaphthalene	25	3.2	80	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
2-Methylnaphthalene	24	3.0	80	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Acetone	71	16	200	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Bromobenzene	ND	2.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Bromodichloromethane	ND	3.5	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Bromoform	ND	4.2	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Bromomethane	ND	5.1	60		µg/L	20	5/10/2018 4:42:00 PM	R51191
2-Butanone	130	23	200	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Carbon disulfide	ND	8.0	200		µg/L	20	5/10/2018 4:42:00 PM	R51191
Carbon Tetrachloride	ND	2.2	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Chlorobenzene	ND	2.1	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Chloroethane	24	4.7	40	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Chloroform	ND	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Chloromethane	ND	5.9	60		µg/L	20	5/10/2018 4:42:00 PM	R51191
2-Chlorotoluene	ND	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
4-Chlorotoluene	ND	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
cis-1,2-DCE	ND	4.1	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
cis-1,3-Dichloropropene	ND	1.6	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	28	40		µg/L	20	5/10/2018 4:42:00 PM	R51191
Dibromochloromethane	ND	1.4	20		µg/L	20	5/10/2018 4:42:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	1.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2-Dichlorobenzene	ND	1.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,3-Dichlorobenzene	ND	3.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Dichlorodifluoromethane	ND	20	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1-Dichloroethane	32	8.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1-Dichloroethene	ND	1.6	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2-Dichloropropane	ND	2.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,3-Dichloropropane	ND	3.3	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
2,2-Dichloropropane	ND	3.1	40		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1-Dichloropropene	ND	1.9	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Hexachlorobutadiene	ND	16	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
2-Hexanone	ND	13	200		µg/L	20	5/10/2018 4:42:00 PM	R51191
Isopropylbenzene	35	1.0	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
4-Isopropyltoluene	4.5	1.9	20	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
4-Methyl-2-pentanone	21	14	200	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Methylene Chloride	ND	2.2	60		µg/L	20	5/10/2018 4:42:00 PM	R51191
n-Butylbenzene	10	2.6	60	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
n-Propylbenzene	96	1.5	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
sec-Butylbenzene	11	2.2	20	J	µg/L	20	5/10/2018 4:42:00 PM	R51191
Styrene	ND	3.1	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
tert-Butylbenzene	ND	2.1	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	2.1	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	2.7	40		µg/L	20	5/10/2018 4:42:00 PM	R51191
Tetrachloroethene (PCE)	ND	2.6	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
trans-1,2-DCE	ND	3.7	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
trans-1,3-Dichloropropene	ND	4.4	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2,3-Trichlorobenzene	ND	2.3	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2,4-Trichlorobenzene	ND	2.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1,1-Trichloroethane	ND	1.5	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,1,2-Trichloroethane	ND	2.8	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Trichloroethene (TCE)	ND	2.2	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Trichlorofluoromethane	ND	3.7	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
1,2,3-Trichloropropane	ND	7.8	40		µg/L	20	5/10/2018 4:42:00 PM	R51191
Vinyl chloride	28	3.6	20		µg/L	20	5/10/2018 4:42:00 PM	R51191
Xylenes, Total	3800	6.4	30		µg/L	20	5/10/2018 4:42:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	20	5/10/2018 4:42:00 PM	R51191
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	20	5/10/2018 4:42:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	20	5/10/2018 4:42:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 1:45:00 PM
Lab ID: 1805275-003 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	20	5/10/2018 4:42:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	72	0.48	2.5		mg/L	50	5/8/2018 1:05:49 PM	R51124
Surr: BFB	96.4	0	70-130		%Rec	50	5/8/2018 1:05:49 PM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/8/2018 5:07:30 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 5:07:30 PM	37978
Surr: DNOP	115	0	76.7-135		%Rec	1	5/8/2018 5:07:30 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/4/2018 12:27:41 PM	R51061
Chloride	0.22	0.029	0.50	J	mg/L	1	5/4/2018 12:27:41 PM	R51061
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 12:27:41 PM	R51061
Bromide	ND	0.027	0.10		mg/L	1	5/4/2018 12:27:41 PM	R51061
Nitrogen, Nitrate (As N)	0.049	0.0066	0.10	J	mg/L	1	5/4/2018 12:27:41 PM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/4/2018 12:27:41 PM	R51061
Sulfate	ND	0.21	0.50		mg/L	1	5/4/2018 12:27:41 PM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 12:10:21 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:10:21 PM	B51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 12:10:21 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:10:21 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:10:21 PM	B51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 12:10:21 PM	B51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 12:10:21 PM	B51375
Manganese	0.00088	0.00039	0.0020	J	mg/L	1	5/18/2018 12:10:21 PM	B51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 12:10:21 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:10:21 PM	B51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 3:11:51 PM	C51452
Zinc	0.0069	0.0021	0.010	J	mg/L	1	5/18/2018 12:10:21 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/18/2018 1:41:33 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:14:51 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:41:33 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 1:41:33 AM	38107
Iron	ND	0.010	0.020		mg/L	1	5/18/2018 1:41:33 AM	38107
Manganese	ND	0.0011	0.0020		mg/L	1	5/18/2018 1:41:33 AM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:41:33 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:14:51 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/14/2018 7:26:21 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:26:21 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 7:26:21 PM	C51261

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/14/2018 7:26:21 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/15/2018 10:37:05 AM	38107
Lead	ND	0.00023	0.00050		mg/L	1	5/15/2018 10:37:05 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:37:05 AM	38107
Uranium	ND	0.000068	0.00050		mg/L	1	5/15/2018 10:37:05 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000048	0.000037	0.00020	J	mg/L	1	5/22/2018 12:19:43 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 2:22:57 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 2:22:57 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 2:22:57 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 2:22:57 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 2:22:57 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 2:22:57 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 2:22:57 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 2:22:57 PM	38002
Surr: 2-Fluorophenol	44.7	0	15-114		%Rec	1	5/15/2018 2:22:57 PM	38002
Surr: Phenol-d5	31.5	0	15-97.9		%Rec	1	5/15/2018 2:22:57 PM	38002
Surr: 2,4,6-Tribromophenol	68.6	0	15-161		%Rec	1	5/15/2018 2:22:57 PM	38002
Surr: Nitrobenzene-d5	61.3	0	29.3-120		%Rec	1	5/15/2018 2:22:57 PM	38002
Surr: 2-Fluorobiphenyl	62.6	0	17.5-116		%Rec	1	5/15/2018 2:22:57 PM	38002
Surr: 4-Terphenyl-d14	61.9	0	21-92.2		%Rec	1	5/15/2018 2:22:57 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.71	0.062	1.0	J	µg/L	1	5/10/2018 5:07:00 PM	R51191
Toluene	0.84	0.064	1.0	J	µg/L	1	5/10/2018 5:07:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 5:07:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 5:07:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 5:07:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 5:07:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 5:07:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 5:07:00 PM	R51191
Xylenes, Total	0.34	0.32	1.5	J	µg/L	1	5/10/2018 5:07:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	5/10/2018 5:07:00 PM	R51191
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/10/2018 5:07:00 PM	R51191
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/10/2018 5:07:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:20:00 PM
Lab ID: 1805275-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/10/2018 5:07:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/8/2018 10:23:54 AM	R51124
Surr: BFB	112	0	70-130		%Rec	1	5/8/2018 10:23:54 AM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/8/2018 5:31:32 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 5:31:32 PM	37978
Surr: DNOP	114	0	76.7-135		%Rec	1	5/8/2018 5:31:32 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/4/2018 1:19:06 PM	R51061
Chloride	0.21	0.029	0.50	J	mg/L	1	5/4/2018 1:19:06 PM	R51061
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 1:19:06 PM	R51061
Bromide	ND	0.027	0.10		mg/L	1	5/4/2018 1:19:06 PM	R51061
Nitrogen, Nitrate (As N)	0.044	0.0066	0.10	J	mg/L	1	5/4/2018 1:19:06 PM	R51061
Phosphorus, Orthophosphate (As P)	0.18	0.093	0.50	J	mg/L	1	5/4/2018 1:19:06 PM	R51061
Sulfate	ND	0.21	0.50		mg/L	1	5/4/2018 1:19:06 PM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/18/2018 12:12:31 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:12:31 PM	B51375
Calcium	ND	0.078	1.0		mg/L	1	5/18/2018 12:12:31 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:12:31 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:12:31 PM	B51375
Iron	ND	0.016	0.020		mg/L	1	5/18/2018 12:12:31 PM	B51375
Magnesium	ND	0.25	1.0		mg/L	1	5/18/2018 12:12:31 PM	B51375
Manganese	ND	0.00039	0.0020		mg/L	1	5/18/2018 12:12:31 PM	B51375
Potassium	ND	0.11	1.0		mg/L	1	5/18/2018 12:12:31 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:12:31 PM	B51375
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 3:13:59 PM	C51452
Zinc	0.0061	0.0021	0.010	J	mg/L	1	5/18/2018 12:12:31 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/18/2018 1:43:45 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:17:01 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:43:45 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 1:43:45 AM	38107
Iron	ND	0.010	0.020		mg/L	1	5/18/2018 1:43:45 AM	38107
Manganese	ND	0.0011	0.0020		mg/L	1	5/18/2018 1:43:45 AM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:43:45 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:17:01 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/16/2018 3:32:39 PM	A51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 3:32:39 PM	A51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 3:32:39 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/16/2018 3:32:39 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/15/2018 10:39:26 AM	38107
Lead	ND	0.00023	0.00050		mg/L	1	5/15/2018 10:39:26 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:39:26 AM	38107
Uranium	ND	0.000068	0.00050		mg/L	1	5/15/2018 10:39:26 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000047	0.000037	0.00020	J	mg/L	1	5/22/2018 12:22:02 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 2:50:46 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 2:50:46 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 2:50:46 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 2:50:46 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 2:50:46 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 2:50:46 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 2:50:46 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 2:50:46 PM	38002
Surr: 2-Fluorophenol	34.7	0	15-114		%Rec	1	5/15/2018 2:50:46 PM	38002
Surr: Phenol-d5	25.5	0	15-97.9		%Rec	1	5/15/2018 2:50:46 PM	38002
Surr: 2,4,6-Tribromophenol	66.5	0	15-161		%Rec	1	5/15/2018 2:50:46 PM	38002
Surr: Nitrobenzene-d5	47.5	0	29.3-120		%Rec	1	5/15/2018 2:50:46 PM	38002
Surr: 2-Fluorobiphenyl	52.6	0	17.5-116		%Rec	1	5/15/2018 2:50:46 PM	38002
Surr: 4-Terphenyl-d14	58.9	0	21-92.2		%Rec	1	5/15/2018 2:50:46 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Toluene	0.59	0.064	1.0	J	µg/L	1	5/10/2018 5:31:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Acetone	8.1	0.82	10	J	µg/L	1	5/10/2018 5:31:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 5:31:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 5:31:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 5:31:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 5:31:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 5:31:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 5:31:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	5/10/2018 5:31:00 PM	R51191
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/10/2018 5:31:00 PM	R51191
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	5/10/2018 5:31:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:30:00 PM
Lab ID: 1805275-005 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/10/2018 5:31:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/8/2018 10:46:52 AM	R51124
Surr: BFB	105	0	70-130		%Rec	1	5/8/2018 10:46:52 AM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.7	0.63	1.0		mg/L	1	5/8/2018 5:55:41 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 5:55:41 PM	37978
Surr: DNOP	112	0	76.7-135		%Rec	1	5/8/2018 5:55:41 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 1:44:49 PM	R51061
Chloride	380	1.5	25		mg/L	50	5/18/2018 1:54:56 PM	R51385
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/4/2018 1:44:49 PM	R51061
Bromide	0.93	0.13	0.50		mg/L	5	5/4/2018 1:44:49 PM	R51061
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/4/2018 1:44:49 PM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 1:44:49 PM	R51061
Sulfate	ND	1.0	2.5		mg/L	5	5/4/2018 1:44:49 PM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.2	0.0049	0.010	*	mg/L	5	5/18/2018 2:02:48 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:21:07 PM	B51375
Calcium	140	0.39	5.0		mg/L	5	5/18/2018 2:02:48 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:21:07 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:21:07 PM	B51375
Iron	9.2	0.16	0.20	*	mg/L	10	5/22/2018 9:48:12 PM	A51451
Magnesium	34	0.25	1.0		mg/L	1	5/18/2018 12:21:07 PM	B51375
Manganese	3.3	0.0020	0.010	*	mg/L	5	5/18/2018 2:02:48 PM	B51375
Potassium	0.43	0.11	1.0	J	mg/L	1	5/18/2018 12:21:07 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:21:07 PM	B51375
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 3:16:04 PM	C51452
Zinc	0.018	0.0021	0.010		mg/L	1	5/18/2018 12:21:07 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.7	0.0050	0.010	*	mg/L	5	5/22/2018 4:21:12 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:19:09 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:45:54 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 1:45:54 AM	38107
Iron	11	0.20	0.40	*	mg/L	20	5/22/2018 4:23:23 PM	38107
Manganese	3.9	0.0055	0.010	*	mg/L	5	5/22/2018 4:21:12 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:45:54 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:19:09 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0075	0.00042	0.0010		mg/L	1	5/14/2018 7:29:22 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:29:22 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 7:29:22 PM	C51261

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.00014	0.000096	0.00050	J	mg/L	1	5/14/2018 7:29:22 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0088	0.00041	0.0010		mg/L	1	5/15/2018 10:41:48 AM	38107
Lead	0.00034	0.00023	0.00050	J	mg/L	1	5/15/2018 10:41:48 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:41:48 AM	38107
Uranium	0.00011	0.000068	0.00050	J	mg/L	1	5/15/2018 10:41:48 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000059	0.000037	0.00020	J	mg/L	1	5/22/2018 12:33:20 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 3:18:34 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4-Dimethylphenol	17	5.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 3:18:34 PM	38002
1-Methylnaphthalene	42	7.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Methylnaphthalene	55	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Methylphenol	21	6.3	10		µg/L	1	5/15/2018 3:18:34 PM	38002
3+4-Methylphenol	22	5.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 3:18:34 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Naphthalene	110	5.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 3:18:34 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 3:18:34 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Phenol	36	6.0	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 3:18:34 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 3:18:34 PM	38002
Surr: 2-Fluorophenol	3.69	0	15-114	S	%Rec	1	5/15/2018 3:18:34 PM	38002
Surr: Phenol-d5	31.1	0	15-97.9		%Rec	1	5/15/2018 3:18:34 PM	38002
Surr: 2,4,6-Tribromophenol	65.0	0	15-161		%Rec	1	5/15/2018 3:18:34 PM	38002
Surr: Nitrobenzene-d5	55.2	0	29.3-120		%Rec	1	5/15/2018 3:18:34 PM	38002
Surr: 2-Fluorobiphenyl	59.7	0	17.5-116		%Rec	1	5/15/2018 3:18:34 PM	38002
Surr: 4-Terphenyl-d14	47.0	0	21-92.2		%Rec	1	5/15/2018 3:18:34 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	13000	31	500		µg/L	500	5/10/2018 5:55:00 PM	R51191
Toluene	4900	3.2	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Ethylbenzene	2100	4.7	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Methyl tert-butyl ether (MTBE)	30	12	50	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2,4-Trimethylbenzene	1200	5.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,3,5-Trimethylbenzene	270	4.4	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Naphthalene	240	5.7	100		µg/L	50	5/10/2018 6:20:00 PM	R51191
1-Methylnaphthalene	88	8.0	200	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
2-Methylnaphthalene	100	7.6	200	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
Acetone	ND	41	500		µg/L	50	5/10/2018 6:20:00 PM	R51191
Bromobenzene	ND	7.0	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Bromodichloromethane	ND	8.8	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Bromoform	ND	11	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Bromomethane	ND	13	150		µg/L	50	5/10/2018 6:20:00 PM	R51191
2-Butanone	ND	57	500		µg/L	50	5/10/2018 6:20:00 PM	R51191
Carbon disulfide	ND	20	500		µg/L	50	5/10/2018 6:20:00 PM	R51191
Carbon Tetrachloride	ND	5.5	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Chlorobenzene	ND	5.3	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Chloroethane	85	12	100	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
Chloroform	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Chloromethane	ND	15	150		µg/L	50	5/10/2018 6:20:00 PM	R51191
2-Chlorotoluene	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
4-Chlorotoluene	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
cis-1,2-DCE	60	10	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	5/10/2018 6:20:00 PM	R51191
Dibromochloromethane	ND	3.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	4.5	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,4-Dichlorobenzene	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Dichlorodifluoromethane	ND	50	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1-Dichloroethane	ND	20	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1-Dichloroethene	ND	4.0	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2-Dichloropropane	ND	5.1	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,3-Dichloropropane	ND	8.4	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
2,2-Dichloropropane	ND	7.9	100		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1-Dichloropropene	ND	4.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Hexachlorobutadiene	ND	40	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
2-Hexanone	ND	33	500		µg/L	50	5/10/2018 6:20:00 PM	R51191
Isopropylbenzene	73	2.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
4-Isopropyltoluene	11	4.8	50	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
4-Methyl-2-pentanone	ND	35	500		µg/L	50	5/10/2018 6:20:00 PM	R51191
Methylene Chloride	ND	5.4	150		µg/L	50	5/10/2018 6:20:00 PM	R51191
n-Butylbenzene	20	6.5	150	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
n-Propylbenzene	170	3.7	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
sec-Butylbenzene	14	5.5	50	J	µg/L	50	5/10/2018 6:20:00 PM	R51191
Styrene	ND	7.8	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
tert-Butylbenzene	ND	5.2	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	5/10/2018 6:20:00 PM	R51191
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
trans-1,2-DCE	ND	9.2	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Trichlorofluoromethane	ND	9.1	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
1,2,3-Trichloropropane	ND	19	100		µg/L	50	5/10/2018 6:20:00 PM	R51191
Vinyl chloride	ND	8.9	50		µg/L	50	5/10/2018 6:20:00 PM	R51191
Xylenes, Total	9600	16	75		µg/L	50	5/10/2018 6:20:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	50	5/10/2018 6:20:00 PM	R51191
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	50	5/10/2018 6:20:00 PM	R51191
Surr: Dibromofluoromethane	110	0	70-130		%Rec	50	5/10/2018 6:20:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 2:45:00 PM
Lab ID: 1805275-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	50	5/10/2018 6:20:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	100	0.97	5.0		mg/L	100	5/8/2018 1:29:07 PM	R51124
Surr: BFB	88.3	0	70-130		%Rec	100	5/8/2018 1:29:07 PM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.6	0.63	1.0		mg/L	1	5/8/2018 6:19:46 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 6:19:46 PM	37978
Surr: DNOP	113	0	76.7-135		%Rec	1	5/8/2018 6:19:46 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.34	0.15	0.50	J	mg/L	5	5/4/2018 2:10:32 PM	R51061
Chloride	250	0.59	10		mg/L	20	5/4/2018 2:23:24 PM	R51061
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/4/2018 2:10:32 PM	R51061
Bromide	1.2	0.13	0.50		mg/L	5	5/4/2018 2:10:32 PM	R51061
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/4/2018 2:10:32 PM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 2:10:32 PM	R51061
Sulfate	22	1.0	2.5		mg/L	5	5/4/2018 2:10:32 PM	R51061
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.46	0.00099	0.0020		mg/L	1	5/18/2018 12:23:08 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:23:08 PM	B51375
Calcium	150	0.39	5.0		mg/L	5	5/18/2018 2:04:56 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:23:08 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:23:08 PM	B51375
Iron	1.4	0.082	0.10	*	mg/L	5	5/18/2018 2:04:56 PM	B51375
Magnesium	29	0.25	1.0		mg/L	1	5/18/2018 12:23:08 PM	B51375
Manganese	3.9	0.0020	0.010	*	mg/L	5	5/18/2018 2:04:56 PM	B51375
Potassium	0.47	0.11	1.0	J	mg/L	1	5/18/2018 12:23:08 PM	B51375
Silver	ND	0.0018	0.0050		mg/L	1	5/18/2018 12:23:08 PM	B51375
Sodium	260	0.82	5.0		mg/L	5	5/23/2018 3:18:11 PM	C51452
Zinc	0.0085	0.0021	0.010	J	mg/L	1	5/18/2018 12:23:08 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.48	0.0010	0.0020		mg/L	1	5/18/2018 1:47:54 AM	38107
Cadmium	ND	0.0029	0.010		mg/L	5	5/22/2018 4:25:27 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:47:54 AM	38107
Copper	0.0052	0.0041	0.0060	J	mg/L	1	5/18/2018 1:47:54 AM	38107
Iron	2.3	0.051	0.10	*	mg/L	5	5/22/2018 4:25:27 PM	38107
Manganese	4.4	0.0055	0.010	*	mg/L	5	5/22/2018 4:25:27 PM	38107
Silver	0.0017	0.0012	0.0050	J	mg/L	1	5/18/2018 1:47:54 AM	38107
Zinc	ND	0.016	0.050		mg/L	5	5/22/2018 4:25:27 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0021	0.00042	0.0010		mg/L	1	5/14/2018 7:32:23 PM	C51261
Lead	ND	0.00017	0.00050		mg/L	1	5/14/2018 7:32:23 PM	C51261
Selenium	ND	0.00076	0.0010		mg/L	1	5/14/2018 7:32:23 PM	C51261

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0042	0.000096	0.00050		mg/L	1	5/14/2018 7:32:23 PM	C51261
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0030	0.00041	0.0010		mg/L	1	5/15/2018 10:44:10 AM	38107
Lead	0.0012	0.00023	0.00050		mg/L	1	5/15/2018 10:44:10 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:44:10 AM	38107
Uranium	0.0044	0.000068	0.00050		mg/L	1	5/15/2018 10:44:10 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000045	0.000037	0.00020	J	mg/L	1	5/22/2018 12:35:32 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 3:46:38 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Carbazole	10	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 3:46:38 PM	38002
1-Methylnaphthalene	54	7.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 3:46:38 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 3:46:38 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Naphthalene	35	5.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 3:46:38 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 3:46:38 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Phenol	13	6.0	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 3:46:38 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 3:46:38 PM	38002
Surr: 2-Fluorophenol	45.9	0	15-114		%Rec	1	5/15/2018 3:46:38 PM	38002
Surr: Phenol-d5	37.2	0	15-97.9		%Rec	1	5/15/2018 3:46:38 PM	38002
Surr: 2,4,6-Tribromophenol	79.1	0	15-161		%Rec	1	5/15/2018 3:46:38 PM	38002
Surr: Nitrobenzene-d5	66.4	0	29.3-120		%Rec	1	5/15/2018 3:46:38 PM	38002
Surr: 2-Fluorobiphenyl	72.2	0	17.5-116		%Rec	1	5/15/2018 3:46:38 PM	38002
Surr: 4-Terphenyl-d14	60.1	0	21-92.2		%Rec	1	5/15/2018 3:46:38 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2800	6.2	100		µg/L	100	5/10/2018 6:44:00 PM	R51191
Toluene	25	0.64	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Ethylbenzene	280	0.93	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Methyl tert-butyl ether (MTBE)	490	2.4	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2,4-Trimethylbenzene	95	1.1	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.87	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Naphthalene	62	1.1	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
1-Methylnaphthalene	80	1.6	40		µg/L	10	5/10/2018 7:08:00 PM	R51191
2-Methylnaphthalene	9.9	1.5	40	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
Acetone	ND	8.2	100		µg/L	10	5/10/2018 7:08:00 PM	R51191
Bromobenzene	ND	1.4	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Bromodichloromethane	ND	1.8	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Bromoform	ND	2.1	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Bromomethane	ND	2.6	30		µg/L	10	5/10/2018 7:08:00 PM	R51191
2-Butanone	ND	11	100		µg/L	10	5/10/2018 7:08:00 PM	R51191
Carbon disulfide	ND	4.0	100		µg/L	10	5/10/2018 7:08:00 PM	R51191
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Chlorobenzene	ND	1.1	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Chloroethane	ND	2.3	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
Chloroform	ND	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Chloromethane	ND	2.9	30		µg/L	10	5/10/2018 7:08:00 PM	R51191
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
cis-1,2-DCE	23	2.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
Dibromochloromethane	ND	0.72	10		µg/L	10	5/10/2018 7:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.91	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1-Dichloroethane	26	4.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1-Dichloroethene	36	0.81	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
2-Hexanone	ND	6.6	100		µg/L	10	5/10/2018 7:08:00 PM	R51191
Isopropylbenzene	19	0.51	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
4-Isopropyltoluene	3.1	0.96	10	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/10/2018 7:08:00 PM	R51191
Methylene Chloride	ND	1.1	30		µg/L	10	5/10/2018 7:08:00 PM	R51191
n-Butylbenzene	8.7	1.3	30	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
n-Propylbenzene	37	0.74	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
sec-Butylbenzene	5.0	1.1	10	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
Styrene	ND	1.6	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
Tetrachloroethene (PCE)	2.5	1.3	10	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1,1-Trichloroethane	33	0.73	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Trichloroethene (TCE)	3.2	1.1	10	J	µg/L	10	5/10/2018 7:08:00 PM	R51191
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/10/2018 7:08:00 PM	R51191
Vinyl chloride	ND	1.8	10		µg/L	10	5/10/2018 7:08:00 PM	R51191
Xylenes, Total	98	3.2	15		µg/L	10	5/10/2018 7:08:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	10	5/10/2018 7:08:00 PM	R51191
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	10	5/10/2018 7:08:00 PM	R51191
Surr: Dibromofluoromethane	111	0	70-130		%Rec	10	5/10/2018 7:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018 3:15:00 PM
Lab ID: 1805275-007 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/10/2018 7:08:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	8.2	0.19	1.0		mg/L	20	5/8/2018 1:52:20 PM	R51124
Surr: BFB	98.5	0	70-130		%Rec	20	5/8/2018 1:52:20 PM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.3	0.63	1.0		mg/L	1	5/8/2018 6:44:08 PM	37978
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/8/2018 6:44:08 PM	37978
Surr: DNOP	112	0	76.7-135		%Rec	1	5/8/2018 6:44:08 PM	37978
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 2:36:15 PM	R51061
Chloride	6800	29	500		mg/L	1E+	5/18/2018 2:07:49 PM	R51385
Bromide	0.58	0.13	0.50		mg/L	5	5/4/2018 2:36:15 PM	R51061
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/4/2018 2:36:15 PM	R51061
Sulfate	ND	1.0	2.5		mg/L	5	5/4/2018 2:36:15 PM	R51061
Nitrate+Nitrite as N	ND	2.7	10		mg/L	50	5/18/2018 2:20:40 PM	R51385
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	34	0.099	0.20	*	mg/L	100	5/18/2018 2:15:48 PM	B51375
Cadmium	ND	0.0010	0.0020		mg/L	1	5/18/2018 12:25:10 PM	B51375
Calcium	1300	1.6	20		mg/L	20	5/18/2018 2:13:37 PM	B51375
Chromium	ND	0.0013	0.0060		mg/L	1	5/18/2018 12:25:10 PM	B51375
Copper	ND	0.0032	0.0060		mg/L	1	5/18/2018 12:25:10 PM	B51375
Iron	50	1.6	2.0	*	mg/L	100	5/18/2018 2:15:48 PM	B51375
Magnesium	360	5.0	20		mg/L	20	5/18/2018 2:13:37 PM	B51375
Manganese	18	0.0078	0.040	*	mg/L	20	5/18/2018 2:13:37 PM	B51375
Potassium	3.6	0.11	1.0		mg/L	1	5/18/2018 12:25:10 PM	B51375
Silver	0.0080	0.0018	0.0050		mg/L	1	5/18/2018 12:25:10 PM	B51375
Sodium	2500	8.2	50		mg/L	50	5/23/2018 3:20:33 PM	C51452
Zinc	0.0027	0.0021	0.010	J	mg/L	1	5/18/2018 12:25:10 PM	B51375
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	34	0.050	0.10	*	mg/L	50	5/22/2018 4:29:57 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:27:50 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:49:53 AM	38107
Copper	0.0061	0.0041	0.0060		mg/L	1	5/18/2018 1:49:53 AM	38107
Iron	53	1.0	2.0	*	mg/L	100	5/22/2018 4:32:07 PM	38107
Manganese	20	0.055	0.10	*	mg/L	50	5/22/2018 4:29:57 PM	38107
Silver	0.0081	0.0012	0.0050		mg/L	1	5/18/2018 1:49:53 AM	38107
Zinc	0.0047	0.0033	0.010	J	mg/L	1	5/22/2018 4:27:50 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.0042	0.010	*	mg/L	10	5/16/2018 3:51:20 PM	A51316
Lead	ND	0.0017	0.0050		mg/L	10	5/16/2018 3:51:20 PM	A51316
Selenium	ND	0.0076	0.010		mg/L	10	5/16/2018 3:51:20 PM	A51316
Uranium	ND	0.00096	0.0050		mg/L	10	5/16/2018 3:51:20 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.016	0.0041	0.010	*	mg/L	10	5/15/2018 11:50:16 AM	38107
Lead	0.0035	0.0023	0.0050	J	mg/L	10	5/15/2018 11:50:16 AM	38107
Selenium	ND	0.0098	0.010		mg/L	10	5/15/2018 11:50:16 AM	38107
Uranium	ND	0.00068	0.0050		mg/L	10	5/15/2018 11:50:16 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:37:44 PM	38215
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 4:14:28 PM	38002
Benzyl alcohol	6.8	6.3	10	J	µg/L	1	5/15/2018 4:14:28 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 4:14:28 PM	38002
2,4-Dimethylphenol	70	5.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 4:14:28 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 4:14:28 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 4:14:28 PM	38002
1-Methylnaphthalene	18	7.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Methylnaphthalene	18	6.3	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Methylphenol	300	32	50		µg/L	5	5/16/2018 1:09:42 PM	38002
3+4-Methylphenol	200	5.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 4:14:28 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Naphthalene	56	5.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 4:14:28 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 4:14:28 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Phenol	460	30	50		µg/L	5	5/16/2018 1:09:42 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 4:14:28 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 4:14:28 PM	38002
Surr: 2-Fluorophenol	3.78	0	15-114	S	%Rec	1	5/15/2018 4:14:28 PM	38002
Surr: Phenol-d5	41.0	0	15-97.9		%Rec	1	5/15/2018 4:14:28 PM	38002
Surr: 2,4,6-Tribromophenol	82.4	0	15-161		%Rec	1	5/15/2018 4:14:28 PM	38002
Surr: Nitrobenzene-d5	68.5	0	29.3-120		%Rec	1	5/15/2018 4:14:28 PM	38002
Surr: 2-Fluorobiphenyl	75.6	0	17.5-116		%Rec	1	5/15/2018 4:14:28 PM	38002
Surr: 4-Terphenyl-d14	68.4	0	21-92.2		%Rec	1	5/15/2018 4:14:28 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	16000	62	1000		µg/L	1E+	5/11/2018 11:37:00 AM	R51242
Toluene	10000	64	1000		µg/L	1E+	5/11/2018 11:37:00 AM	R51242
Ethylbenzene	2400	9.3	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Methyl tert-butyl ether (MTBE)	190	24	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2,4-Trimethylbenzene	790	11	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,3,5-Trimethylbenzene	220	8.7	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Naphthalene	130	11	200	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
1-Methylnaphthalene	72	16	400	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
2-Methylnaphthalene	52	15	400	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
Acetone	ND	82	1000		µg/L	100	5/10/2018 7:32:00 PM	R51191
Bromobenzene	ND	14	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Bromodichloromethane	ND	18	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Bromoform	ND	21	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Bromomethane	ND	26	300		µg/L	100	5/10/2018 7:32:00 PM	R51191
2-Butanone	ND	110	1000		µg/L	100	5/10/2018 7:32:00 PM	R51191
Carbon disulfide	ND	40	1000		µg/L	100	5/10/2018 7:32:00 PM	R51191
Carbon Tetrachloride	ND	11	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Chlorobenzene	ND	11	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Chloroethane	ND	23	200		µg/L	100	5/10/2018 7:32:00 PM	R51191
Chloroform	ND	40	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Chloromethane	ND	29	300		µg/L	100	5/10/2018 7:32:00 PM	R51191
2-Chlorotoluene	ND	40	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
4-Chlorotoluene	ND	40	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
cis-1,2-DCE	ND	20	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	5/10/2018 7:32:00 PM	R51191
Dibromochloromethane	ND	7.2	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Dibromomethane	ND	9.1	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	5/10/2018 7:32:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	15	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,4-Dichlorobenzene	ND	40	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Dichlorodifluoromethane	ND	100	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1-Dichloroethane	80	40	100	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1-Dichloroethene	ND	8.1	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2-Dichloropropane	ND	10	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,3-Dichloropropane	ND	17	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
2,2-Dichloropropane	ND	16	200		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1-Dichloropropene	ND	9.3	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Hexachlorobutadiene	ND	80	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
2-Hexanone	ND	66	1000		µg/L	100	5/10/2018 7:32:00 PM	R51191
Isopropylbenzene	120	5.1	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
4-Isopropyltoluene	17	9.6	100	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/10/2018 7:32:00 PM	R51191
Methylene Chloride	ND	11	300		µg/L	100	5/10/2018 7:32:00 PM	R51191
n-Butylbenzene	21	13	300	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
n-Propylbenzene	170	7.4	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
sec-Butylbenzene	22	11	100	J	µg/L	100	5/10/2018 7:32:00 PM	R51191
Styrene	ND	16	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
tert-Butylbenzene	ND	10	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	5/10/2018 7:32:00 PM	R51191
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
trans-1,2-DCE	ND	18	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,1,2-Trichloroethane	ND	14	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Trichloroethene (TCE)	ND	11	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Trichlorofluoromethane	ND	18	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
1,2,3-Trichloropropane	ND	39	200		µg/L	100	5/10/2018 7:32:00 PM	R51191
Vinyl chloride	ND	18	100		µg/L	100	5/10/2018 7:32:00 PM	R51191
Xylenes, Total	7800	32	150		µg/L	100	5/10/2018 7:32:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	100	5/10/2018 7:32:00 PM	R51191
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	100	5/10/2018 7:32:00 PM	R51191
Surr: Dibromofluoromethane	110	0	70-130		%Rec	100	5/10/2018 7:32:00 PM	R51191
Surr: Toluene-d8	114	0	70-130		%Rec	100	5/10/2018 7:32:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/2/2018
Lab ID: 1805275-008
Matrix: AQUEOUS
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	82	1.9	10		mg/L	200	5/8/2018 11:33:04 AM	R51124
Surr: BFB	101	0	70-130		%Rec	200	5/8/2018 11:33:04 AM	R51124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805275-009
Matrix: TRIP BLANK
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 12:01:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 12:01:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 12:01:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805275-009
Matrix: TRIP BLANK
Received Date: 5/4/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 12:01:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 12:01:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 12:01:00 PM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/11/2018 12:01:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/11/2018 12:01:00 PM	R51242
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/11/2018 12:01:00 PM	R51242
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/11/2018 12:01:00 PM	R51242
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/11/2018 12:01:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	94.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	86.5	50	150			J
Calcium	0.49	1.0	0.5000	0	97.2	50	150			J
Chromium	0.0063	0.0060	0.006000	0	104	50	150			
Copper	0.0069	0.0060	0.006000	0	116	50	150			
Iron	0.025	0.020	0.02000	0	125	50	150			
Magnesium	0.45	1.0	0.5000	0	90.7	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Potassium	0.50	1.0	0.5000	0	100	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	0.0061	0.010	0.005000	0	123	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51375**	RunNo: **51375**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1671734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	98.2	85	115			
Chromium	0.49	0.0060	0.5000	0	97.8	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-B**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B51375**			RunNo: **51375**					
Prep Date:		Analysis Date: **5/18/2018**			SeqNo: **1671734**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	98.2	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Zinc	0.49	0.010	0.5000	0	97.9	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675221**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675222**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.018	0.020	0.02000	0	88.6	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51451**			RunNo: **51451**					
Prep Date:		Analysis Date: **5/22/2018**			SeqNo: **1675223**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	102	85	115			

Sample ID	**MB-C**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **C51452**			RunNo: **51452**					
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676401**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-C**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **C51452**			RunNo: **51452**					
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676402**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.49	1.0	0.5000	0	97.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-C**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **C51452**			RunNo: **51452**					
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676403**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A51516**			RunNo: **51516**					
Prep Date:		Analysis Date: **5/24/2018**			SeqNo: **1679019**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51516**			RunNo: **51516**					
Prep Date:		Analysis Date: **5/24/2018**			SeqNo: **1679020**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.50	1.0	0.5000	0	99.4	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51516**			RunNo: **51516**					
Prep Date:		Analysis Date: **5/24/2018**			SeqNo: **1679021**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667610**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID	**LLLCS-38107**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667611**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	84.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Copper	0.0048	0.0060	0.006000	0	80.5	50	150			J
Iron	0.024	0.020	0.02000	0	120	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			

Sample ID	**LCS-38107**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667612**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Manganese	0.47	0.0020	0.5000	0	94.2	85	115			

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51355**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**	SeqNo:	**1671236**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LLLCS-38107**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**38107**		RunNo:	**51355**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**		SeqNo:	**1671237**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium		0.0064	0.0060	0.006000	0	107	50	150			
Silver		0.0054	0.0050	0.005000	0	107	50	150			
Zinc		0.0057	0.010	0.005000	0	114	50	150			J

Sample ID	**LCS-38107**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**38107**		RunNo:	**51355**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**		SeqNo:	**1671238**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium		0.49	0.0060	0.5000	0	97.6	85	115			
Silver		0.11	0.0050	0.1000	0	110	85	115			
Zinc		0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666266** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.7	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.3	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	92.4	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51261**	RunNo: **51261**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.011	0.00050	0.01250	0	90.5	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666895**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38107**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666896**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.5	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.2	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.3	50	150			J

Sample ID	**MSLCS-38107**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666897**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.2	85	115			
Lead	0.012	0.00050	0.01250	0	97.0	85	115			
Selenium	0.024	0.0010	0.02500	0	97.4	85	115			
Uranium	0.012	0.00050	0.01250	0	97.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38215**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38215**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674118**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000040	0.00020								J

Sample ID	**LCS-38215**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38215**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674217**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.8	80	120			

Sample ID	**1805275-005FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB04**	Batch ID:	**38215**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674225**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	.00004706	102	75	125			

Sample ID	**1805275-005FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB04**	Batch ID:	**38215**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674230**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	.00004706	101	75	125	1.72	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51061**	RunNo: **51061**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658258** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51061**	RunNo: **51061**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.0	90	110			
Chloride	4.6	0.50	5.000	0	92.3	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.5	90	110			
Bromide	2.4	0.10	2.500	0	95.0	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.8	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	93.0	90	110			
Sulfate	9.1	0.50	10.00	0	90.9	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51385**	RunNo: **51385**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1672191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.24	0.50								J
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51385**	RunNo: **51385**
Prep Date:	Analysis Date: **5/18/2018**	SeqNo: **1672192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805275-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-15**	Batch ID: **37978**	RunNo: **51108**
Prep Date: **5/7/2018**	Analysis Date: **5/8/2018**	SeqNo: **1660703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.4	1.0	5.000	4.033	87.0	82.8	143			
Surr: DNOP	0.55		0.5000		110	76.7	135			

Sample ID **LCS-37978**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **37978**	RunNo: **51108**
Prep Date: **5/7/2018**	Analysis Date: **5/8/2018**	SeqNo: **1660704** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	102	70	130			
Surr: DNOP	0.55		0.5000		109	76.7	135			

Sample ID **MB-37978**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **37978**	RunNo: **51108**
Prep Date: **5/7/2018**	Analysis Date: **5/8/2018**	SeqNo: **1660705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	76.7	135			

Sample ID **1805275-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-15**	Batch ID: **37978**	RunNo: **51108**
Prep Date: **5/7/2018**	Analysis Date: **5/8/2018**	SeqNo: **1660792** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.0	1.0	5.000	4.033	99.2	82.8	143	6.98	20	
Surr: DNOP	0.56		0.5000		111	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663211** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	23	1.0	20.00	0	117	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	119	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	0.068	1.0								J
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.13	2.0								J
1-Methylnaphthalene	0.29	4.0								J
2-Methylnaphthalene	0.34	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.15	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665695** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.31	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.12	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38002**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667364** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	83.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	83.8	40.5	108			
2-Chlorophenol	150	10	200.0	0	73.3	35	103			
1,4-Dichlorobenzene	64	10	100.0	0	63.5	24.7	93.7			
2,4-Dinitrotoluene	80	10	100.0	0	79.5	35.6	91.4			
N-Nitrosodi-n-propylamine	82	10	100.0	0	81.8	41.6	114			
4-Nitrophenol	130	10	200.0	0	64.1	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.9	25.3	98.5			
Phenol	110	10	200.0	0	54.4	20.9	75.1			
Pyrene	83	10	100.0	0	83.0	45.6	108			
1,2,4-Trichlorobenzene	67	10	100.0	0	66.6	30.3	106			
Surr: 2-Fluorophenol	130		200.0		63.4	15	114			
Surr: Phenol-d5	110		200.0		52.8	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	15	161			
Surr: Nitrobenzene-d5	74		100.0		74.3	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		74.1	17.5	116			
Surr: 4-Terphenyl-d14	150		100.0		150	21	92.2			S

Sample ID **lcsd-38002**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.6	39.7	103	8.50	34.9	
4-Chloro-3-methylphenol	150	10	200.0	0	74.8	40.5	108	11.3	30.2	
2-Chlorophenol	140	10	200.0	0	70.9	35	103	3.34	49.5	
1,4-Dichlorobenzene	63	10	100.0	0	62.6	24.7	93.7	1.40	43.2	
2,4-Dinitrotoluene	72	10	100.0	0	71.8	35.6	91.4	10.2	49.9	
N-Nitrosodi-n-propylamine	75	10	100.0	0	75.0	41.6	114	8.62	42.1	
4-Nitrophenol	130	10	200.0	0	63.6	20.7	74.3	0.752	31.5	
Pentachlorophenol	120	20	200.0	0	60.8	25.3	98.5	29.6	52.5	
Phenol	110	10	200.0	0	56.6	20.9	75.1	4.00	54.4	
Pyrene	71	10	100.0	0	71.2	45.6	108	15.2	30.7	
1,2,4-Trichlorobenzene	67	10	100.0	0	67.4	30.3	106	1.19	48.1	
Surr: 2-Fluorophenol	130		200.0		63.6	15	114	0	0	
Surr: Phenol-d5	110		200.0		54.1	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		74.5	15	161	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.1	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	72		100.0		72.0	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcsd-38002**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	120		100.0		117	21	92.2	0	0	S

Sample ID **mb-38002**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	10	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**
08-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38002**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38002**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.3	15	114			
Surr: Phenol-d5	130		200.0		64.1	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		67.2	15	161			
Surr: Nitrobenzene-d5	76		100.0		75.5	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.4	17.5	116			
Surr: 4-Terphenyl-d14	83		100.0		82.6	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805275**

08-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805275-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-15**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660937** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	200	10	100.0	97.28	102	70	130			
Surr: BFB	1900		2000		94.8	70	130			

Sample ID **1805275-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-15**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	180	10	100.0	97.28	86.2	70	130	8.27	20	
Surr: BFB	1800		2000		89.8	70	130	0	0	

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660947** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.8	70	130			
Surr: BFB	9.4		10.00		94.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660948** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805275 | RcptNo: 1

Received By: Isaiah Ortiz 5/4/2018 9:05:00 AM IO

Completed By: Ashley Gallegos 5/4/2018 9:38:07 AM AG

Reviewed By: MW 5/7/18

Labeled by: ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 24 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: ENM

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
2	2.3	Good	Yes			
3	0.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	1240	H_2O	MKTF-15	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber-2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700			5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Coolers #1 1.4 #2 2.3 #3 0.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	1315	H_2O	MKTF-04	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700		Courier	5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other _____
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 180525	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	1345	H_2O	MKTF-11	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700			5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	~~1430~~ 1420	H_2O	EB04	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700		Laura		
				5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	1430	H_2O	FB04	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by	Received by:	Date	Time
5/3/18	0700			5/4/18	903
Date:	Time:	Relinquished by	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275
5/2/18	1445	H_2O	MKTF-10	40ml VOA-5	HCl	-006
				1 Liter Amber -1	Neat	
				250 ml Amber-1	Neat	
				250 ml Plastic-1	HNO_3	
				125 ml Plastic-1	HNO_3	
				125 ml Plastic-1	H_2SO_4	
				125 ml Plastic-1	Neat	

Analysis Request

Container Type and #	Preservative Type	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
40ml VOA-5	HCl			X							X						
1 Liter Amber -1	Neat											X					
250 ml Amber-1	Neat			X													
250 ml Plastic-1	HNO_3												X				
125 ml Plastic-1	HNO_3												X	X			
125 ml Plastic-1	H_2SO_4													X			
125 ml Plastic-1	Neat													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700			5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	1515	H_2O	MKTF-09	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700			5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805275	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/2/18	—	H_2O	DUP04	40ml VOA-5	HCl	-008			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/2/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCL	-109										X						

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/18	0700			5/4/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 07, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling MKTF OrderNo.: 1805323

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 15 sample(s) on 5/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805323**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 4:27:18 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 4:27:18 PM	38012
Surr: DNOP	116	0	76.7-135		%Rec	1	5/11/2018 4:27:18 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/4/2018 11:59:59 PM	R51062
Chloride	0.21	0.029	0.50	J	mg/L	1	5/4/2018 11:59:59 PM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 11:59:59 PM	R51062
Bromide	ND	0.027	0.10		mg/L	1	5/4/2018 11:59:59 PM	R51062
Nitrogen, Nitrate (As N)	0.026	0.0066	0.10	J	mg/L	1	5/4/2018 11:59:59 PM	R51062
Phosphorus, Orthophosphate (As P)	0.12	0.093	0.50	J	mg/L	1	5/4/2018 11:59:59 PM	R51062
Sulfate	ND	0.21	0.50		mg/L	1	5/4/2018 11:59:59 PM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	ND	0.00099	0.0020		mg/L	1	5/23/2018 10:46:41 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:20:43 PM	A51451
Calcium	ND	0.078	1.0		mg/L	1	5/22/2018 10:20:43 PM	A51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:20:43 PM	A51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:20:43 PM	A51451
Iron	ND	0.016	0.020		mg/L	1	5/22/2018 10:20:43 PM	A51451
Magnesium	ND	0.25	1.0		mg/L	1	5/22/2018 10:20:43 PM	A51451
Manganese	ND	0.00039	0.0020		mg/L	1	5/22/2018 10:20:43 PM	A51451
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 10:20:43 PM	A51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:20:43 PM	A51451
Sodium	0.37	0.16	1.0	J	mg/L	1	5/22/2018 10:20:43 PM	A51451
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/23/2018 10:46:41 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 4:02:52 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:02:52 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:02:52 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:14:25 PM	38191
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 5:14:25 PM	38191
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 5:14:25 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 4:02:52 PM	38191
Zinc	ND	0.0033	0.010		mg/L	1	5/21/2018 4:02:52 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/16/2018 4:15:15 PM	A51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 4:15:15 PM	A51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:15:15 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/16/2018 4:15:15 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/18/2018 10:51:47 AM	38191
Lead	ND	0.00023	0.00050		mg/L	1	5/18/2018 10:51:47 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 10:51:47 AM	38191
Uranium	ND	0.000068	0.00050		mg/L	1	5/18/2018 10:51:47 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000037	0.000037	0.00020	J	mg/L	1	5/22/2018 11:27:39 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Benzoic acid	12	6.3	20	J	µg/L	1	5/15/2018 4:42:35 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 4:42:35 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 4:42:35 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 4:42:35 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 4:42:35 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 4:42:35 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 4:42:35 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 4:42:35 PM	38002
Surr: 2-Fluorophenol	45.6	0	15-114		%Rec	1	5/15/2018 4:42:35 PM	38002
Surr: Phenol-d5	32.4	0	15-97.9		%Rec	1	5/15/2018 4:42:35 PM	38002
Surr: 2,4,6-Tribromophenol	78.0	0	15-161		%Rec	1	5/15/2018 4:42:35 PM	38002
Surr: Nitrobenzene-d5	63.7	0	29.3-120		%Rec	1	5/15/2018 4:42:35 PM	38002
Surr: 2-Fluorobiphenyl	69.0	0	17.5-116		%Rec	1	5/15/2018 4:42:35 PM	38002
Surr: 4-Terphenyl-d14	66.4	0	21-92.2		%Rec	1	5/15/2018 4:42:35 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.40	0.062	1.0	J	µg/L	1	5/10/2018 8:44:00 PM	R51191
Toluene	0.35	0.064	1.0	J	µg/L	1	5/10/2018 8:44:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 8:44:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 8:44:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 8:44:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 8:44:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 8:44:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 8:44:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 8:44:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/10/2018 8:44:00 PM	R51191
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/10/2018 8:44:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/10/2018 8:44:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 8:50:00 AM
Lab ID: 1805323-001 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/10/2018 8:44:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 3:04:55 PM	R5109€
Surr: BFB	105	0	70-130		%Rec	1	5/7/2018 3:04:55 PM	R5109€

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 5:33:51 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 5:33:51 PM	38012
Surr: DNOP	111	0	76.7-135		%Rec	1	5/11/2018 5:33:51 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/5/2018 12:24:48 AM	R51062
Chloride	ND	0.029	0.50		mg/L	1	5/5/2018 12:24:48 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 12:24:48 AM	R51062
Bromide	ND	0.027	0.10		mg/L	1	5/5/2018 12:24:48 AM	R51062
Nitrogen, Nitrate (As N)	0.028	0.0066	0.10	J	mg/L	1	5/5/2018 12:24:48 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/5/2018 12:24:48 AM	R51062
Sulfate	ND	0.21	0.50		mg/L	1	5/5/2018 12:24:48 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	ND	0.00099	0.0020		mg/L	1	5/23/2018 10:59:11 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:22:53 PM	A51451
Calcium	ND	0.078	1.0		mg/L	1	5/22/2018 10:22:53 PM	A51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:22:53 PM	A51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:22:53 PM	A51451
Iron	ND	0.016	0.020		mg/L	1	5/22/2018 10:22:53 PM	A51451
Magnesium	ND	0.25	1.0		mg/L	1	5/22/2018 10:22:53 PM	A51451
Manganese	ND	0.00039	0.0020		mg/L	1	5/22/2018 10:22:53 PM	A51451
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 10:22:53 PM	A51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:22:53 PM	A51451
Sodium	0.19	0.16	1.0	J	mg/L	1	5/22/2018 10:22:53 PM	A51451
Zinc	0.0077	0.0021	0.010	J	mg/L	1	5/23/2018 10:59:11 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 4:08:59 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:08:59 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:08:59 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:20:50 PM	38191
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 5:20:50 PM	38191
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 5:20:50 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 4:08:59 PM	38191
Zinc	ND	0.0033	0.010		mg/L	1	5/21/2018 4:08:59 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/16/2018 4:17:37 PM	A51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 4:17:37 PM	A51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:17:37 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/16/2018 4:17:37 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/18/2018 10:54:09 AM	38191
Lead	ND	0.00023	0.00050		mg/L	1	5/18/2018 10:54:09 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 10:54:09 AM	38191
Uranium	ND	0.000068	0.00050		mg/L	1	5/18/2018 10:54:09 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 11:34:33 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Benzoic acid	11	6.3	20	J	µg/L	1	5/15/2018 5:10:22 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 5:10:22 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 5:10:22 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 5:10:22 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 5:10:22 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 5:10:22 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 5:10:22 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 5:10:22 PM	38002
Surr: 2-Fluorophenol	42.4	0	15-114		%Rec	1	5/15/2018 5:10:22 PM	38002
Surr: Phenol-d5	29.1	0	15-97.9		%Rec	1	5/15/2018 5:10:22 PM	38002
Surr: 2,4,6-Tribromophenol	74.0	0	15-161		%Rec	1	5/15/2018 5:10:22 PM	38002
Surr: Nitrobenzene-d5	58.8	0	29.3-120		%Rec	1	5/15/2018 5:10:22 PM	38002
Surr: 2-Fluorobiphenyl	65.6	0	17.5-116		%Rec	1	5/15/2018 5:10:22 PM	38002
Surr: 4-Terphenyl-d14	66.4	0	21-92.2		%Rec	1	5/15/2018 5:10:22 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.25	0.062	1.0	J	µg/L	1	5/10/2018 9:08:00 PM	R51191
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 9:08:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 9:08:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 9:08:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 9:08:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 9:08:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 9:08:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 9:08:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/10/2018 9:08:00 PM	R51191
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/10/2018 9:08:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/10/2018 9:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 9:30:00 AM
Lab ID: 1805323-002 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/10/2018 9:08:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 2:41:50 PM	R5109€
Surr: BFB	113	0	70-130		%Rec	1	5/7/2018 2:41:50 PM	R5109€

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 5:56:08 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 5:56:08 PM	38012
Surr: DNOP	114	0	76.7-135		%Rec	1	5/11/2018 5:56:08 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.65	0.030	0.10		mg/L	1	5/5/2018 12:49:36 AM	R51062
Chloride	290	0.59	10		mg/L	20	5/5/2018 1:02:01 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 12:49:36 AM	R51062
Bromide	0.97	0.027	0.10		mg/L	1	5/5/2018 12:49:36 AM	R51062
Nitrogen, Nitrate (As N)	0.40	0.0066	0.10		mg/L	1	5/5/2018 12:49:36 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/5/2018 12:49:36 AM	R51062
Sulfate	320	4.1	10		mg/L	20	5/5/2018 1:02:01 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	0.034	0.00099	0.0020		mg/L	1	5/23/2018 11:01:18 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:25:04 PM	A51451
Calcium	160	0.39	5.0		mg/L	5	5/23/2018 11:03:25 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:25:04 PM	A51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:25:04 PM	A51451
Iron	ND	0.016	0.020		mg/L	1	5/22/2018 10:25:04 PM	A51451
Magnesium	30	0.25	1.0		mg/L	1	5/22/2018 10:25:04 PM	A51451
Manganese	2.5	0.0020	0.010	*	mg/L	5	5/23/2018 11:03:25 AM	A51452
Potassium	0.63	0.11	1.0	J	mg/L	1	5/22/2018 10:25:04 PM	A51451
Silver	0.0028	0.0018	0.0050	J	mg/L	1	5/22/2018 10:25:04 PM	A51451
Sodium	310	0.82	5.0		mg/L	5	5/23/2018 11:03:25 AM	A51452
Zinc	0.0071	0.0021	0.010	J	mg/L	1	5/23/2018 11:01:18 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.082	0.0010	0.0020		mg/L	1	5/21/2018 4:11:05 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:11:05 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:11:05 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:23:00 PM	38191
Iron	1.6	0.051	0.10	*	mg/L	5	5/22/2018 5:25:00 PM	38191
Manganese	2.4	0.0055	0.010	*	mg/L	5	5/22/2018 5:25:00 PM	38191
Silver	0.0020	0.0012	0.0050	J	mg/L	1	5/21/2018 4:11:05 PM	38191
Zinc	0.0058	0.0033	0.010	J	mg/L	1	5/21/2018 4:11:05 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/16/2018 4:41:41 PM	A51316
Lead	ND	0.00087	0.0025		mg/L	5	5/16/2018 4:41:41 PM	A51316
Selenium	ND	0.0038	0.0050		mg/L	5	5/16/2018 4:41:41 PM	A51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.026	0.00048	0.0025		mg/L	5	5/16/2018 4:41:41 PM	A51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0025	0.00041	0.0010		mg/L	1	5/18/2018 11:05:57 AM	38191
Lead	0.0015	0.00023	0.00050		mg/L	1	5/18/2018 11:05:57 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:05:57 AM	38191
Uranium	0.027	0.00034	0.0025		mg/L	5	5/18/2018 11:08:18 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000045	0.000037	0.00020	J	mg/L	1	5/22/2018 11:36:51 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 5:38:15 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 5:38:15 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 5:38:15 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 5:38:15 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 5:38:15 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 5:38:15 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 5:38:15 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 5:38:15 PM	38002
Surr: 2-Fluorophenol	43.0	0	15-114		%Rec	1	5/15/2018 5:38:15 PM	38002
Surr: Phenol-d5	32.0	0	15-97.9		%Rec	1	5/15/2018 5:38:15 PM	38002
Surr: 2,4,6-Tribromophenol	64.0	0	15-161		%Rec	1	5/15/2018 5:38:15 PM	38002
Surr: Nitrobenzene-d5	59.1	0	29.3-120		%Rec	1	5/15/2018 5:38:15 PM	38002
Surr: 2-Fluorobiphenyl	62.8	0	17.5-116		%Rec	1	5/15/2018 5:38:15 PM	38002
Surr: 4-Terphenyl-d14	54.6	0	21-92.2		%Rec	1	5/15/2018 5:38:15 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.30	0.062	1.0	J	µg/L	1	5/10/2018 9:32:00 PM	R51191
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Methyl tert-butyl ether (MTBE)	0.78	0.24	1.0	J	µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 9:32:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 9:32:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 9:32:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 9:32:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 9:32:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 9:32:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 9:32:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/10/2018 9:32:00 PM	R51191
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/10/2018 9:32:00 PM	R51191
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/10/2018 9:32:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 10:00:00 AM
Lab ID: 1805323-003 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/10/2018 9:32:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 3:28:02 PM	R51096
Surr: BFB	102	0	70-130		%Rec	1	5/7/2018 3:28:02 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.045	0.0049	0.0095		µg/L	1	5/16/2018 5:30:28 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.1	0.63	1.0		mg/L	1	5/11/2018 6:18:33 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 6:18:33 PM	38012
Surr: DNOP	111	0	76.7-135		%Rec	1	5/11/2018 6:18:33 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/5/2018 1:14:26 AM	R51062
Chloride	240	0.59	10		mg/L	20	5/5/2018 1:26:50 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/5/2018 1:14:26 AM	R51062
Bromide	0.63	0.13	0.50		mg/L	5	5/5/2018 1:14:26 AM	R51062
Nitrogen, Nitrate (As N)	0.084	0.033	0.50	J	mg/L	5	5/5/2018 1:14:26 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/5/2018 1:14:26 AM	R51062
Sulfate	23	1.0	2.5		mg/L	5	5/5/2018 1:14:26 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	1.1	0.0049	0.010		mg/L	5	5/23/2018 11:07:40 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:27:13 PM	B51451
Calcium	41	0.078	1.0		mg/L	1	5/22/2018 10:27:13 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:27:13 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:27:13 PM	B51451
Iron	1.9	0.082	0.10	*	mg/L	5	5/23/2018 11:07:40 AM	A51452
Magnesium	8.4	0.25	1.0		mg/L	1	5/22/2018 10:27:13 PM	B51451
Manganese	0.67	0.00039	0.0020	*	mg/L	1	5/22/2018 10:27:13 PM	B51451
Potassium	1.7	0.11	1.0		mg/L	1	5/22/2018 10:27:13 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:27:13 PM	B51451
Sodium	240	0.82	5.0		mg/L	5	5/23/2018 11:07:40 AM	A51452
Zinc	0.0074	0.0021	0.010	J	mg/L	1	5/23/2018 11:05:43 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.2	0.0050	0.010		mg/L	5	5/22/2018 5:29:19 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:13:04 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:13:04 PM	38191
Copper	0.014	0.0041	0.0060		mg/L	1	5/22/2018 5:27:21 PM	38191
Iron	3.4	0.051	0.10	*	mg/L	5	5/22/2018 5:29:19 PM	38191
Manganese	0.72	0.0011	0.0020	*	mg/L	1	5/22/2018 5:27:21 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 4:13:04 PM	38191
Zinc	0.0054	0.0033	0.010	J	mg/L	1	5/21/2018 4:13:04 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0028	0.00042	0.0010		mg/L	1	5/16/2018 4:34:31 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.0011	0.00017	0.00050		mg/L	1	5/16/2018 4:34:31 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:34:31 PM	B51316
Uranium	0.016	0.000096	0.00050		mg/L	1	5/16/2018 4:34:31 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0027	0.00041	0.0010		mg/L	1	5/18/2018 11:10:38 AM	38191
Lead	0.0046	0.00023	0.00050		mg/L	1	5/18/2018 11:10:38 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:10:38 AM	38191
Uranium	0.013	0.000068	0.00050		mg/L	1	5/18/2018 11:10:38 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000094	0.000037	0.00020	J	mg/L	1	5/22/2018 11:39:08 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 6:06:28 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
1,4-Dichlorobenzene	7.0	5.8	10	J	µg/L	1	5/15/2018 6:06:28 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 6:06:28 PM	38002
1-Methylnaphthalene	88	7.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2-Methylnaphthalene	100	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 6:06:28 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 6:06:28 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Naphthalene	280	10	20		µg/L	2	5/16/2018 2:05:39 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 6:06:28 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 6:06:28 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Phenol	23	6.0	10		µg/L	1	5/15/2018 6:06:28 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 6:06:28 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 6:06:28 PM	38002
Surr: 2-Fluorophenol	48.6	0	15-114		%Rec	1	5/15/2018 6:06:28 PM	38002
Surr: Phenol-d5	38.0	0	15-97.9		%Rec	1	5/15/2018 6:06:28 PM	38002
Surr: 2,4,6-Tribromophenol	78.8	0	15-161		%Rec	1	5/15/2018 6:06:28 PM	38002
Surr: Nitrobenzene-d5	68.4	0	29.3-120		%Rec	1	5/15/2018 6:06:28 PM	38002
Surr: 2-Fluorobiphenyl	80.4	0	17.5-116		%Rec	1	5/15/2018 6:06:28 PM	38002
Surr: 4-Terphenyl-d14	69.1	0	21-92.2		%Rec	1	5/15/2018 6:06:28 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2100	6.2	100		µg/L	100	5/11/2018 12:25:00 PM	R51242
Toluene	50	0.64	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Ethylbenzene	78	0.93	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Methyl tert-butyl ether (MTBE)	41	2.4	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2,4-Trimethylbenzene	630	1.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,3,5-Trimethylbenzene	36	0.87	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Naphthalene	370	1.1	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
1-Methylnaphthalene	75	1.6	40		µg/L	10	5/10/2018 9:56:00 PM	R51191
2-Methylnaphthalene	80	1.5	40		µg/L	10	5/10/2018 9:56:00 PM	R51191
Acetone	ND	8.2	100		µg/L	10	5/10/2018 9:56:00 PM	R51191
Bromobenzene	ND	1.4	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Bromodichloromethane	ND	1.8	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Bromoform	ND	2.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Bromomethane	ND	2.6	30		µg/L	10	5/10/2018 9:56:00 PM	R51191
2-Butanone	ND	11	100		µg/L	10	5/10/2018 9:56:00 PM	R51191
Carbon disulfide	ND	4.0	100		µg/L	10	5/10/2018 9:56:00 PM	R51191
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Chlorobenzene	ND	1.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Chloroethane	ND	2.3	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
Chloroform	ND	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Chloromethane	ND	2.9	30		µg/L	10	5/10/2018 9:56:00 PM	R51191
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
cis-1,2-DCE	ND	2.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/10/2018 9:56:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
Dibromochloromethane	ND	0.72	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Dibromomethane	ND	0.91	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,4-Dichlorobenzene	12	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1-Dichloroethane	18	4.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1-Dichloroethene	67	0.81	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
2-Hexanone	ND	6.6	100		µg/L	10	5/10/2018 9:56:00 PM	R51191
Isopropylbenzene	84	0.51	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
4-Isopropyltoluene	7.4	0.96	10	J	µg/L	10	5/10/2018 9:56:00 PM	R51191
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/10/2018 9:56:00 PM	R51191
Methylene Chloride	ND	1.1	30		µg/L	10	5/10/2018 9:56:00 PM	R51191
n-Butylbenzene	40	1.3	30		µg/L	10	5/10/2018 9:56:00 PM	R51191
n-Propylbenzene	100	0.74	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
sec-Butylbenzene	15	1.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Styrene	ND	1.6	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1,1-Trichloroethane	4.4	0.73	10	J	µg/L	10	5/10/2018 9:56:00 PM	R51191
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Trichloroethene (TCE)	190	1.1	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/10/2018 9:56:00 PM	R51191
Vinyl chloride	ND	1.8	10		µg/L	10	5/10/2018 9:56:00 PM	R51191
Xylenes, Total	580	3.2	15		µg/L	10	5/10/2018 9:56:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	10	5/10/2018 9:56:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 2:30:00 PM
Lab ID: 1805323-004 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	10	5/10/2018 9:56:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	10	5/10/2018 9:56:00 PM	R51191
Surr: Toluene-d8	111	0	70-130		%Rec	10	5/10/2018 9:56:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	16	0.48	2.5		mg/L	50	5/7/2018 4:37:28 PM	R51096
Surr: BFB	91.5	0	70-130		%Rec	50	5/7/2018 4:37:28 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0096		µg/L	1	5/16/2018 6:16:08 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	10	0.63	1.0		mg/L	1	5/11/2018 6:41:01 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 6:41:01 PM	38012
Surr: DNOP	122	0	76.7-135		%Rec	1	5/11/2018 6:41:01 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.78	0.15	0.50		mg/L	5	5/5/2018 1:39:15 AM	R51062
Chloride	180	0.59	10		mg/L	20	5/5/2018 1:51:39 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/5/2018 1:39:15 AM	R51062
Bromide	1.0	0.13	0.50		mg/L	5	5/5/2018 1:39:15 AM	R51062
Nitrogen, Nitrate (As N)	0.085	0.033	0.50	J	mg/L	5	5/5/2018 1:39:15 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/5/2018 1:39:15 AM	R51062
Sulfate	ND	1.0	2.5		mg/L	5	5/5/2018 1:39:15 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	5.7	0.020	0.040	*	mg/L	20	5/23/2018 11:14:00 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:29:12 PM	B51451
Calcium	130	0.39	5.0		mg/L	5	5/23/2018 11:11:50 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:29:12 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:29:12 PM	B51451
Iron	12	0.33	0.40	*	mg/L	20	5/23/2018 11:14:00 AM	A51452
Magnesium	34	0.25	1.0		mg/L	1	5/22/2018 10:29:12 PM	B51451
Manganese	1.9	0.0020	0.010	*	mg/L	5	5/23/2018 11:11:50 AM	A51452
Potassium	0.57	0.11	1.0	J	mg/L	1	5/22/2018 10:29:12 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:29:12 PM	B51451
Sodium	210	0.82	5.0		mg/L	5	5/23/2018 11:11:50 AM	A51452
Zinc	0.0096	0.0021	0.010	J	mg/L	1	5/23/2018 11:09:54 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	5.9	0.020	0.040	*	mg/L	20	5/22/2018 5:42:04 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:15:00 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:15:00 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:37:50 PM	38191
Iron	13	0.20	0.40	*	mg/L	20	5/22/2018 5:42:04 PM	38191
Manganese	1.9	0.0055	0.010	*	mg/L	5	5/22/2018 5:39:54 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/21/2018 4:15:00 PM	38191
Zinc	0.016	0.0033	0.010		mg/L	1	5/21/2018 4:15:00 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	5/16/2018 4:44:03 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.0016	0.00017	0.00050		mg/L	1	5/16/2018 4:44:03 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:44:03 PM	B51316
Uranium	0.00011	0.000096	0.00050	J	mg/L	1	5/16/2018 4:44:03 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	5/18/2018 11:12:58 AM	38191
Lead	0.0051	0.00023	0.00050		mg/L	1	5/18/2018 11:12:58 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:12:58 AM	38191
Uranium	0.00019	0.000068	0.00050	J	mg/L	1	5/18/2018 11:12:58 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000052	0.000037	0.00020	J	mg/L	1	5/22/2018 11:41:25 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	7.8	5.8	10	J	µg/L	1	5/15/2018 6:35:04 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 6:35:04 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Carbazole	7.4	6.3	10	J	µg/L	1	5/15/2018 6:35:04 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Fluorene	10	6.3	10	J	µg/L	1	5/15/2018 6:35:04 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 6:35:04 PM	38002
1-Methylnaphthalene	190	7.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2-Methylnaphthalene	320	13	20		µg/L	2	5/16/2018 2:33:23 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 6:35:04 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 6:35:04 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Naphthalene	330	10	20		µg/L	2	5/16/2018 2:33:23 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 6:35:04 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 6:35:04 PM	38002
Phenanthrene	6.3	6.0	10	J	µg/L	1	5/15/2018 6:35:04 PM	38002
Phenol	48	6.0	10		µg/L	1	5/15/2018 6:35:04 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 6:35:04 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 6:35:04 PM	38002
Surr: 2-Fluorophenol	37.8	0	15-114		%Rec	1	5/15/2018 6:35:04 PM	38002
Surr: Phenol-d5	32.2	0	15-97.9		%Rec	1	5/15/2018 6:35:04 PM	38002
Surr: 2,4,6-Tribromophenol	75.6	0	15-161		%Rec	1	5/15/2018 6:35:04 PM	38002
Surr: Nitrobenzene-d5	56.9	0	29.3-120		%Rec	1	5/15/2018 6:35:04 PM	38002
Surr: 2-Fluorobiphenyl	60.4	0	17.5-116		%Rec	1	5/15/2018 6:35:04 PM	38002
Surr: 4-Terphenyl-d14	63.1	0	21-92.2		%Rec	1	5/15/2018 6:35:04 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9400	31	500		µg/L	500	5/10/2018 10:20:00 PM	R51191
Toluene	30	3.2	50	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
Ethylbenzene	1900	4.7	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Methyl tert-butyl ether (MTBE)	2100	12	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2,4-Trimethylbenzene	42	5.6	50	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
1,3,5-Trimethylbenzene	5.7	4.4	50	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Naphthalene	670	5.7	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
1-Methylnaphthalene	400	8.0	200		µg/L	50	5/10/2018 10:44:00 PM	R51191
2-Methylnaphthalene	540	7.6	200		µg/L	50	5/10/2018 10:44:00 PM	R51191
Acetone	ND	41	500		µg/L	50	5/10/2018 10:44:00 PM	R51191
Bromobenzene	ND	7.0	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Bromodichloromethane	ND	8.8	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Bromoform	ND	11	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Bromomethane	ND	13	150		µg/L	50	5/10/2018 10:44:00 PM	R51191
2-Butanone	ND	57	500		µg/L	50	5/10/2018 10:44:00 PM	R51191
Carbon disulfide	ND	20	500		µg/L	50	5/10/2018 10:44:00 PM	R51191
Carbon Tetrachloride	ND	5.5	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Chlorobenzene	ND	5.3	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Chloroethane	ND	12	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
Chloroform	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Chloromethane	ND	15	150		µg/L	50	5/10/2018 10:44:00 PM	R51191
2-Chlorotoluene	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
4-Chlorotoluene	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
cis-1,2-DCE	ND	10	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	5/10/2018 10:44:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
Dibromochloromethane	ND	3.6	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Dibromomethane	ND	4.5	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,4-Dichlorobenzene	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Dichlorodifluoromethane	ND	50	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1-Dichloroethane	ND	20	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1-Dichloroethene	ND	4.0	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2-Dichloropropane	ND	5.1	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,3-Dichloropropane	ND	8.4	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
2,2-Dichloropropane	ND	7.9	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1-Dichloropropene	ND	4.6	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Hexachlorobutadiene	ND	40	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
2-Hexanone	ND	33	500		µg/L	50	5/10/2018 10:44:00 PM	R51191
Isopropylbenzene	43	2.6	50	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
4-Isopropyltoluene	ND	4.8	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
4-Methyl-2-pentanone	ND	35	500		µg/L	50	5/10/2018 10:44:00 PM	R51191
Methylene Chloride	ND	5.4	150		µg/L	50	5/10/2018 10:44:00 PM	R51191
n-Butylbenzene	13	6.5	150	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
n-Propylbenzene	90	3.7	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
sec-Butylbenzene	7.0	5.5	50	J	µg/L	50	5/10/2018 10:44:00 PM	R51191
Styrene	ND	7.8	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
tert-Butylbenzene	ND	5.2	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
trans-1,2-DCE	ND	9.2	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Trichlorofluoromethane	ND	9.1	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
1,2,3-Trichloropropane	ND	19	100		µg/L	50	5/10/2018 10:44:00 PM	R51191
Vinyl chloride	ND	8.9	50		µg/L	50	5/10/2018 10:44:00 PM	R51191
Xylenes, Total	190	16	75		µg/L	50	5/10/2018 10:44:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	50	5/10/2018 10:44:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 3:40:00 PM
Lab ID: 1805323-005 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	50	5/10/2018 10:44:00 PM	R51191
Surr: Dibromofluoromethane	110	0	70-130		%Rec	50	5/10/2018 10:44:00 PM	R51191
Surr: Toluene-d8	111	0	70-130		%Rec	50	5/10/2018 10:44:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	26	0.48	2.5		mg/L	50	5/7/2018 5:00:30 PM	R51096
Surr: BFB	97.4	0	70-130		%Rec	50	5/7/2018 5:00:30 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/16/2018 6:31:36 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	5/11/2018 7:03:26 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 7:03:26 PM	38012
Surr: DNOP	116	0	76.7-135		%Rec	1	5/11/2018 7:03:26 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.58	0.030	0.10		mg/L	1	5/5/2018 2:28:53 AM	R51062
Chloride	190	0.59	10		mg/L	20	5/5/2018 2:41:18 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 2:28:53 AM	R51062
Bromide	1.3	0.027	0.10		mg/L	1	5/5/2018 2:28:53 AM	R51062
Nitrogen, Nitrate (As N)	0.032	0.0066	0.10	J	mg/L	1	5/5/2018 2:28:53 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/5/2018 2:28:53 AM	R51062
Sulfate	48	0.21	0.50		mg/L	1	5/5/2018 2:28:53 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.31	0.00099	0.0020		mg/L	1	5/22/2018 10:31:09 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:31:09 PM	B51451
Calcium	140	0.39	5.0		mg/L	5	5/23/2018 11:24:12 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:31:09 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:31:09 PM	B51451
Iron	3.3	0.082	0.10	*	mg/L	5	5/23/2018 11:24:12 AM	A51452
Magnesium	40	0.25	1.0		mg/L	1	5/22/2018 10:31:09 PM	B51451
Manganese	3.3	0.0020	0.010	*	mg/L	5	5/23/2018 11:24:12 AM	A51452
Potassium	0.43	0.11	1.0	J	mg/L	1	5/22/2018 10:31:09 PM	B51451
Silver	0.0022	0.0018	0.0050	J	mg/L	1	5/22/2018 10:31:09 PM	B51451
Sodium	170	0.82	5.0		mg/L	5	5/23/2018 11:24:12 AM	A51452
Zinc	0.0061	0.0021	0.010	J	mg/L	1	5/23/2018 11:22:12 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	5/22/2018 5:46:13 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:26:23 PM	38191
Chromium	0.0036	0.0018	0.0060	J	mg/L	1	5/21/2018 4:26:23 PM	38191
Copper	0.0059	0.0041	0.0060	J	mg/L	1	5/22/2018 5:44:07 PM	38191
Iron	8.5	0.10	0.20	*	mg/L	10	5/22/2018 5:48:24 PM	38191
Manganese	4.0	0.0055	0.010	*	mg/L	5	5/22/2018 5:46:13 PM	38191
Silver	0.0016	0.0012	0.0050	J	mg/L	1	5/22/2018 5:44:07 PM	38191
Zinc	0.014	0.0033	0.010		mg/L	1	5/22/2018 5:44:07 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	5/16/2018 4:46:29 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.00022	0.00017	0.00050	J	mg/L	1	5/16/2018 4:46:29 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:46:29 PM	B51316
Uranium	0.0028	0.000096	0.00050		mg/L	1	5/16/2018 4:46:29 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0036	0.00041	0.0010		mg/L	1	5/18/2018 12:04:56 PM	38191
Lead	0.0073	0.00023	0.00050		mg/L	1	5/18/2018 12:04:56 PM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 12:04:56 PM	38191
Uranium	0.0038	0.000068	0.00050		mg/L	1	5/18/2018 12:04:56 PM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000055	0.000037	0.00020	J	mg/L	1	5/22/2018 11:43:44 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Benzoic acid	14	6.3	20	J	µg/L	1	5/15/2018 7:03:48 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 7:03:48 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 7:03:48 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 7:03:48 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 7:03:48 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 7:03:48 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 7:03:48 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 7:03:48 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 7:03:48 PM	38002
Surr: 2-Fluorophenol	33.0	0	15-114		%Rec	1	5/15/2018 7:03:48 PM	38002
Surr: Phenol-d5	26.0	0	15-97.9		%Rec	1	5/15/2018 7:03:48 PM	38002
Surr: 2,4,6-Tribromophenol	66.0	0	15-161		%Rec	1	5/15/2018 7:03:48 PM	38002
Surr: Nitrobenzene-d5	48.4	0	29.3-120		%Rec	1	5/15/2018 7:03:48 PM	38002
Surr: 2-Fluorobiphenyl	52.4	0	17.5-116		%Rec	1	5/15/2018 7:03:48 PM	38002
Surr: 4-Terphenyl-d14	53.3	0	21-92.2		%Rec	1	5/15/2018 7:03:48 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9.9	0.062	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Ethylbenzene	0.74	0.093	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
Methyl tert-butyl ether (MTBE)	56	0.24	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Naphthalene	0.69	0.11	2.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
1-Methylnaphthalene	0.87	0.16	4.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
2-Methylnaphthalene	0.91	0.15	4.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 11:08:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 11:08:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 11:08:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Chlorobenzene	0.56	0.11	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,4-Dichlorobenzene	5.6	0.40	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1-Dichloroethane	0.81	0.40	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 11:08:00 PM	R51191
Isopropylbenzene	0.47	0.051	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 11:08:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
n-Propylbenzene	0.35	0.074	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
sec-Butylbenzene	1.9	0.11	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
tert-Butylbenzene	0.15	0.10	1.0	J	µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 11:08:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 11:08:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/10/2018 11:08:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018 4:45:00 PM
Lab ID: 1805323-006 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	5/10/2018 11:08:00 PM	R51191
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/10/2018 11:08:00 PM	R51191
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/10/2018 11:08:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.44	0.0097	0.050		mg/L	1	5/7/2018 5:23:38 PM	R51096
Surr: BFB	103	0	70-130		%Rec	1	5/7/2018 5:23:38 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 7:25:41 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 7:25:41 PM	38012
Surr: DNOP	120	0	76.7-135		%Rec	1	5/11/2018 7:25:41 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.62	0.030	0.10		mg/L	1	5/5/2018 2:53:42 AM	R51062
Chloride	290	0.59	10		mg/L	20	5/5/2018 3:06:07 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 2:53:42 AM	R51062
Bromide	0.96	0.027	0.10		mg/L	1	5/5/2018 2:53:42 AM	R51062
Nitrogen, Nitrate (As N)	0.52	0.0066	0.10		mg/L	1	5/5/2018 2:53:42 AM	R51062
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/5/2018 2:53:42 AM	R51062
Sulfate	320	4.1	10		mg/L	20	5/5/2018 3:06:07 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.036	0.00099	0.0020		mg/L	1	5/22/2018 10:33:11 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:33:11 PM	B51451
Calcium	150	0.39	5.0		mg/L	5	5/23/2018 11:28:33 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:33:11 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:33:11 PM	B51451
Iron	0.11	0.082	0.10		mg/L	5	5/23/2018 11:28:33 AM	A51452
Magnesium	30	0.25	1.0		mg/L	1	5/22/2018 10:33:11 PM	B51451
Manganese	2.5	0.0020	0.010	*	mg/L	5	5/23/2018 11:28:33 AM	A51452
Potassium	0.72	0.11	1.0	J	mg/L	1	5/22/2018 10:33:11 PM	B51451
Silver	0.0028	0.0018	0.0050	J	mg/L	1	5/22/2018 10:33:11 PM	B51451
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 11:28:33 AM	A51452
Zinc	0.0093	0.0021	0.010	J	mg/L	1	5/23/2018 11:26:19 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.078	0.0010	0.0020		mg/L	1	5/21/2018 4:28:23 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:28:23 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:28:23 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:50:34 PM	38191
Iron	1.6	0.051	0.10	*	mg/L	5	5/22/2018 5:52:34 PM	38191
Manganese	2.3	0.0055	0.010	*	mg/L	5	5/22/2018 5:52:34 PM	38191
Silver	0.0024	0.0012	0.0050	J	mg/L	1	5/22/2018 5:50:34 PM	38191
Zinc	0.0072	0.0033	0.010	J	mg/L	1	5/22/2018 5:50:34 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	5/16/2018 4:48:54 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 4:48:54 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:48:54 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.026	0.00048	0.0025		mg/L	5	5/16/2018 5:22:31 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	5/18/2018 11:22:23 AM	38191
Lead	0.0014	0.00023	0.00050		mg/L	1	5/18/2018 11:22:23 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:22:23 AM	38191
Uranium	0.027	0.00034	0.0025		mg/L	5	5/18/2018 11:24:44 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000050	0.000037	0.00020	J	mg/L	1	5/22/2018 11:46:02 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 7:32:40 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 7:32:40 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 7:32:40 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 7:32:40 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 7:32:40 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 7:32:40 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 7:32:40 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 7:32:40 PM	38002
Surr: 2-Fluorophenol	34.2	0	15-114		%Rec	1	5/15/2018 7:32:40 PM	38002
Surr: Phenol-d5	23.9	0	15-97.9		%Rec	1	5/15/2018 7:32:40 PM	38002
Surr: 2,4,6-Tribromophenol	61.2	0	15-161		%Rec	1	5/15/2018 7:32:40 PM	38002
Surr: Nitrobenzene-d5	56.4	0	29.3-120		%Rec	1	5/15/2018 7:32:40 PM	38002
Surr: 2-Fluorobiphenyl	57.7	0	17.5-116		%Rec	1	5/15/2018 7:32:40 PM	38002
Surr: 4-Terphenyl-d14	55.4	0	21-92.2		%Rec	1	5/15/2018 7:32:40 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.29	0.062	1.0	J	µg/L	1	5/10/2018 11:32:00 PM	R51191
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Methyl tert-butyl ether (MTBE)	0.81	0.24	1.0	J	µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 11:32:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 11:32:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 11:32:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 11:32:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 11:32:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 11:32:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 11:32:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/10/2018 11:32:00 PM	R51191
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/10/2018 11:32:00 PM	R51191
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/10/2018 11:32:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/3/2018
Lab ID: 1805323-007
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/10/2018 11:32:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 5:46:45 PM	R5109€
Surr: BFB	105	0	70-130		%Rec	1	5/7/2018 5:46:45 PM	R5109€

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 7:48:00 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 7:48:00 PM	38012
Surr: DNOP	126	0	76.7-135		%Rec	1	5/11/2018 7:48:00 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/5/2018 3:18:31 AM	R51062
Chloride	0.13	0.029	0.50	J	mg/L	1	5/5/2018 3:18:31 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 3:18:31 AM	R51062
Bromide	ND	0.027	0.10		mg/L	1	5/5/2018 3:18:31 AM	R51062
Nitrogen, Nitrate (As N)	0.017	0.0066	0.10	J	mg/L	1	5/5/2018 3:18:31 AM	R51062
Phosphorus, Orthophosphate (As P)	0.10	0.093	0.50	J	mg/L	1	5/5/2018 3:18:31 AM	R51062
Sulfate	ND	0.21	0.50		mg/L	1	5/5/2018 3:18:31 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/22/2018 10:35:21 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:35:21 PM	B51451
Calcium	ND	0.078	1.0		mg/L	1	5/22/2018 10:35:21 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:35:21 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:35:21 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 11:30:49 AM	A51452
Magnesium	ND	0.25	1.0		mg/L	1	5/22/2018 10:35:21 PM	B51451
Manganese	ND	0.00039	0.0020		mg/L	1	5/22/2018 10:35:21 PM	B51451
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 10:35:21 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:35:21 PM	B51451
Sodium	0.19	0.16	1.0	J	mg/L	1	5/22/2018 10:35:21 PM	B51451
Zinc	0.0073	0.0021	0.010	J	mg/L	1	5/23/2018 11:30:49 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 4:30:22 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:30:22 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:30:22 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:54:57 PM	38191
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 5:54:57 PM	38191
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 5:54:57 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 5:54:57 PM	38191
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 5:54:57 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/16/2018 4:56:05 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 4:56:05 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:56:05 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/16/2018 4:56:05 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/18/2018 11:31:47 AM	38191
Lead	ND	0.00023	0.00050		mg/L	1	5/18/2018 11:31:47 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:31:47 AM	38191
Uranium	ND	0.000068	0.00050		mg/L	1	5/18/2018 11:31:47 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000052	0.000037	0.00020	J	mg/L	1	5/22/2018 11:48:13 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Acenaphthylene	ND	6.2	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Aniline	ND	6.2	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Anthracene	ND	5.7	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Azobenzene	ND	6.7	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzoic acid	ND	6.3	20		µg/L	1	5/15/2018 8:01:25 PM	38002
Benzyl alcohol	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Carbazole	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Chloroaniline	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Chlorophenol	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Chrysene	ND	6.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Dibenzofuran	ND	6.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Diethyl phthalate	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Fluoranthene	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Fluorene	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Hexachloroethane	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Isophorone	ND	6.2	10		µg/L	1	5/15/2018 8:01:25 PM	38002
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Methylphenol	ND	6.3	10		µg/L	1	5/15/2018 8:01:25 PM	38002
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/15/2018 8:01:25 PM	38002
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Naphthalene	ND	5.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Nitroaniline	ND	5.9	10		µg/L	1	5/15/2018 8:01:25 PM	38002
3-Nitroaniline	ND	6.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Nitroaniline	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Nitrobenzene	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2-Nitrophenol	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
4-Nitrophenol	ND	5.6	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Pentachlorophenol	ND	5.3	20		µg/L	1	5/15/2018 8:01:25 PM	38002
Phenanthrene	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Phenol	ND	6.0	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Pyrene	ND	6.5	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Pyridine	ND	5.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/15/2018 8:01:25 PM	38002
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/15/2018 8:01:25 PM	38002
Surr: 2-Fluorophenol	39.7	0	15-114		%Rec	1	5/15/2018 8:01:25 PM	38002
Surr: Phenol-d5	30.2	0	15-97.9		%Rec	1	5/15/2018 8:01:25 PM	38002
Surr: 2,4,6-Tribromophenol	80.1	0	15-161		%Rec	1	5/15/2018 8:01:25 PM	38002
Surr: Nitrobenzene-d5	62.0	0	29.3-120		%Rec	1	5/15/2018 8:01:25 PM	38002
Surr: 2-Fluorobiphenyl	61.5	0	17.5-116		%Rec	1	5/15/2018 8:01:25 PM	38002
Surr: 4-Terphenyl-d14	62.7	0	21-92.2		%Rec	1	5/15/2018 8:01:25 PM	38002
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Toluene	ND	0.064	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Naphthalene	ND	0.11	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Acetone	ND	0.82	10		µg/L	1	5/10/2018 11:56:00 PM	R51191
Bromobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Bromoform	ND	0.21	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Bromomethane	ND	0.26	3.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
2-Butanone	ND	1.1	10		µg/L	1	5/10/2018 11:56:00 PM	R51191
Carbon disulfide	ND	0.40	10		µg/L	1	5/10/2018 11:56:00 PM	R51191
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Chloroethane	ND	0.23	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Chloroform	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Chloromethane	ND	0.29	3.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
2-Hexanone	ND	0.66	10		µg/L	1	5/10/2018 11:56:00 PM	R51191
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/10/2018 11:56:00 PM	R51191
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Styrene	ND	0.16	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/10/2018 11:56:00 PM	R51191
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/10/2018 11:56:00 PM	R51191
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/10/2018 11:56:00 PM	R51191
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/10/2018 11:56:00 PM	R51191
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/10/2018 11:56:00 PM	R51191

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 7:45:00 AM
Lab ID: 1805323-008 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/10/2018 11:56:00 PM	R51191
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 6:09:48 PM	R5109€
Surr: BFB	102	0	70-130		%Rec	1	5/7/2018 6:09:48 PM	R5109€

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 8:10:14 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 8:10:14 PM	38012
Surr: DNOP	125	0	76.7-135		%Rec	1	5/11/2018 8:10:14 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/5/2018 3:43:21 AM	R51062
Chloride	0.25	0.029	0.50	J	mg/L	1	5/5/2018 3:43:21 AM	R51062
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/5/2018 3:43:21 AM	R51062
Bromide	ND	0.027	0.10		mg/L	1	5/5/2018 3:43:21 AM	R51062
Nitrogen, Nitrate (As N)	0.020	0.0066	0.10	J	mg/L	1	5/5/2018 3:43:21 AM	R51062
Phosphorus, Orthophosphate (As P)	0.12	0.093	0.50	J	mg/L	1	5/5/2018 3:43:21 AM	R51062
Sulfate	ND	0.21	0.50		mg/L	1	5/5/2018 3:43:21 AM	R51062
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/22/2018 10:45:35 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:45:35 PM	B51451
Calcium	ND	0.078	1.0		mg/L	1	5/22/2018 10:45:35 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:45:35 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:45:35 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 11:37:02 AM	A51452
Magnesium	ND	0.25	1.0		mg/L	1	5/22/2018 10:45:35 PM	B51451
Manganese	ND	0.00039	0.0020		mg/L	1	5/22/2018 10:45:35 PM	B51451
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 10:45:35 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:45:35 PM	B51451
Sodium	0.35	0.16	1.0	J	mg/L	1	5/22/2018 10:45:35 PM	B51451
Zinc	0.0072	0.0021	0.010	J	mg/L	1	5/23/2018 11:37:02 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/21/2018 4:32:29 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:32:29 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:32:29 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 5:57:07 PM	38191
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 5:57:07 PM	38191
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 5:57:07 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 5:57:07 PM	38191
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 5:57:07 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/16/2018 4:58:27 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 4:58:27 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 4:58:27 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/16/2018 4:58:27 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/18/2018 11:34:07 AM	38191
Lead	ND	0.00023	0.00050		mg/L	1	5/18/2018 11:34:07 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:34:07 AM	38191
Uranium	ND	0.000068	0.00050		mg/L	1	5/18/2018 11:34:07 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000039	0.000037	0.00020	J	mg/L	1	5/22/2018 11:50:25 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/16/2018 3:56:42 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 3:56:42 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 3:56:42 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 3:56:42 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 3:56:42 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 3:56:42 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 3:56:42 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 3:56:42 PM	38063
Surr: 2-Fluorophenol	52.2	0	15-114		%Rec	1	5/16/2018 3:56:42 PM	38063
Surr: Phenol-d5	38.2	0	15-97.9		%Rec	1	5/16/2018 3:56:42 PM	38063
Surr: 2,4,6-Tribromophenol	85.8	0	15-161		%Rec	1	5/16/2018 3:56:42 PM	38063
Surr: Nitrobenzene-d5	75.2	0	29.3-120		%Rec	1	5/16/2018 3:56:42 PM	38063
Surr: 2-Fluorobiphenyl	71.6	0	17.5-116		%Rec	1	5/16/2018 3:56:42 PM	38063
Surr: 4-Terphenyl-d14	75.7	0	21-92.2		%Rec	1	5/16/2018 3:56:42 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 1:37:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 1:37:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 1:37:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 1:37:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 1:37:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 1:37:00 PM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/11/2018 1:37:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/11/2018 1:37:00 PM	R51242
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/11/2018 1:37:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/11/2018 1:37:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:10:00 AM
Lab ID: 1805323-009
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/11/2018 1:37:00 PM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 6:32:51 PM	R51096
Surr: BFB	102	0	70-130		%Rec	1	5/7/2018 6:32:51 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 8:32:29 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 8:32:29 PM	38012
Surr: DNOP	124	0	76.7-135		%Rec	1	5/11/2018 8:32:29 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.31	0.030	0.10		mg/L	1	5/21/2018 1:46:08 PM	R51417
Chloride	230	0.59	10		mg/L	20	5/4/2018 7:10:09 PM	R51063
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 6:57:45 PM	R51063
Bromide	1.2	0.027	0.10		mg/L	1	5/4/2018 6:57:45 PM	R51063
Nitrogen, Nitrate (As N)	8.1	0.13	2.0		mg/L	20	5/4/2018 7:10:09 PM	R51063
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/4/2018 6:57:45 PM	R51063
Sulfate	250	4.1	10		mg/L	20	5/4/2018 7:10:09 PM	R51063
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.050	0.00099	0.0020		mg/L	1	5/22/2018 10:47:47 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:47:47 PM	B51451
Calcium	64	0.078	1.0		mg/L	1	5/22/2018 10:47:47 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:47:47 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:47:47 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 11:39:09 AM	A51452
Magnesium	14	0.25	1.0		mg/L	1	5/22/2018 10:47:47 PM	B51451
Manganese	0.00041	0.00039	0.0020	J	mg/L	1	5/22/2018 10:47:47 PM	B51451
Potassium	1.2	0.11	1.0		mg/L	1	5/22/2018 10:47:47 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:47:47 PM	B51451
Sodium	390	0.82	5.0		mg/L	5	5/23/2018 11:41:14 AM	A51452
Zinc	0.0061	0.0021	0.010	J	mg/L	1	5/23/2018 11:39:09 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.049	0.0010	0.0020		mg/L	1	5/21/2018 4:38:38 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:38:38 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:38:38 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:09:58 PM	38191
Iron	0.34	0.010	0.020	*	mg/L	1	5/22/2018 6:09:58 PM	38191
Manganese	0.0078	0.0011	0.0020		mg/L	1	5/22/2018 6:09:58 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 6:09:58 PM	38191
Zinc	0.0068	0.0033	0.010	J	mg/L	1	5/22/2018 6:09:58 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	5/16/2018 5:00:52 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 5:00:52 PM	B51316
Selenium	0.0025	0.00076	0.0010		mg/L	1	5/16/2018 5:00:52 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.036	0.00048	0.0025	*	mg/L	5	5/16/2018 5:29:39 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0015	0.00041	0.0010		mg/L	1	5/18/2018 11:36:28 AM	38191
Lead	0.00033	0.00023	0.00050	J	mg/L	1	5/18/2018 11:36:28 AM	38191
Selenium	0.0027	0.00098	0.0010		mg/L	1	5/18/2018 11:36:28 AM	38191
Uranium	0.037	0.00034	0.0025	*	mg/L	5	5/18/2018 12:07:17 PM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.00015	0.000037	0.00020	J	mg/L	1	5/22/2018 11:52:37 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Benzoic acid	11	6.3	20	J	µg/L	1	5/16/2018 4:24:33 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 4:24:33 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 4:24:33 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 4:24:33 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 4:24:33 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 4:24:33 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 4:24:33 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 4:24:33 PM	38063
Surr: 2-Fluorophenol	38.4	0	15-114		%Rec	1	5/16/2018 4:24:33 PM	38063
Surr: Phenol-d5	37.1	0	15-97.9		%Rec	1	5/16/2018 4:24:33 PM	38063
Surr: 2,4,6-Tribromophenol	71.0	0	15-161		%Rec	1	5/16/2018 4:24:33 PM	38063
Surr: Nitrobenzene-d5	57.6	0	29.3-120		%Rec	1	5/16/2018 4:24:33 PM	38063
Surr: 2-Fluorobiphenyl	58.2	0	17.5-116		%Rec	1	5/16/2018 4:24:33 PM	38063
Surr: 4-Terphenyl-d14	68.4	0	21-92.2		%Rec	1	5/16/2018 4:24:33 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Methyl tert-butyl ether (MTBE)	0.87	0.24	1.0	J	µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 2:49:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 2:49:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 2:49:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1-Dichloroethene	1.4	0.081	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 2:49:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 2:49:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Trichloroethene (TCE)	2.7	0.11	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 2:49:00 PM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/11/2018 2:49:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	5/11/2018 2:49:00 PM	R51242
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/11/2018 2:49:00 PM	R51242
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/11/2018 2:49:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 8:45:00 AM
Lab ID: 1805323-010 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/11/2018 2:49:00 PM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/7/2018 8:05:08 PM	R51096
Surr: BFB	108	0	70-130		%Rec	1	5/7/2018 8:05:08 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.4	0.63	1.0		mg/L	1	5/11/2018 8:54:41 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 8:54:41 PM	38012
Surr: DNOP	132	0	76.7-135		%Rec	1	5/11/2018 8:54:41 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.26	0.030	0.10		mg/L	1	5/21/2018 1:59:00 PM	R51417
Chloride	130	0.59	10		mg/L	20	5/4/2018 7:34:58 PM	R51063
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 7:22:33 PM	R51063
Bromide	1.9	0.027	0.10		mg/L	1	5/4/2018 7:22:33 PM	R51063
Nitrogen, Nitrate (As N)	0.054	0.0066	0.10	J	mg/L	1	5/4/2018 7:22:33 PM	R51063
Phosphorus, Orthophosphate (As P)	1.2	0.093	0.50		mg/L	1	5/4/2018 7:22:33 PM	R51063
Sulfate	68	4.1	10		mg/L	20	5/4/2018 7:34:58 PM	R51063
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.51	0.00099	0.0020		mg/L	1	5/22/2018 10:49:53 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:49:53 PM	B51451
Calcium	110	0.39	5.0		mg/L	5	5/23/2018 11:51:43 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:49:53 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:49:53 PM	B51451
Iron	0.17	0.016	0.020		mg/L	1	5/23/2018 11:49:35 AM	A51452
Magnesium	22	0.25	1.0		mg/L	1	5/22/2018 10:49:53 PM	B51451
Manganese	2.7	0.0020	0.010	*	mg/L	5	5/23/2018 11:51:43 AM	A51452
Potassium	0.69	0.11	1.0	J	mg/L	1	5/22/2018 10:49:53 PM	B51451
Silver	0.0022	0.0018	0.0050	J	mg/L	1	5/22/2018 10:49:53 PM	B51451
Sodium	270	0.82	5.0		mg/L	5	5/23/2018 11:51:43 AM	A51452
Zinc	0.0058	0.0021	0.010	J	mg/L	1	5/23/2018 11:49:35 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.45	0.0010	0.0020		mg/L	1	5/21/2018 4:40:46 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:40:46 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:40:46 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:12:11 PM	38191
Iron	1.8	0.051	0.10	*	mg/L	5	5/22/2018 6:14:11 PM	38191
Manganese	2.8	0.0055	0.010	*	mg/L	5	5/22/2018 6:14:11 PM	38191
Silver	0.0015	0.0012	0.0050	J	mg/L	1	5/22/2018 6:12:11 PM	38191
Zinc	0.0040	0.0033	0.010	J	mg/L	1	5/22/2018 6:12:11 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0049	0.00042	0.0010		mg/L	1	5/16/2018 5:03:17 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 5:03:17 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 5:03:17 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0045	0.000096	0.00050		mg/L	1	5/16/2018 5:03:17 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0071	0.00041	0.0010		mg/L	1	5/18/2018 11:41:12 AM	38191
Lead	0.00026	0.00023	0.00050	J	mg/L	1	5/18/2018 11:41:12 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:41:12 AM	38191
Uranium	0.0050	0.000068	0.00050		mg/L	1	5/18/2018 11:41:12 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 11:54:50 AM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Benzoic acid	11	6.3	20	J	µg/L	1	5/16/2018 5:48:14 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 5:48:14 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 5:48:14 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 5:48:14 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 5:48:14 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 5:48:14 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 5:48:14 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 5:48:14 PM	38063
Surr: 2-Fluorophenol	44.9	0	15-114		%Rec	1	5/16/2018 5:48:14 PM	38063
Surr: Phenol-d5	37.1	0	15-97.9		%Rec	1	5/16/2018 5:48:14 PM	38063
Surr: 2,4,6-Tribromophenol	84.9	0	15-161		%Rec	1	5/16/2018 5:48:14 PM	38063
Surr: Nitrobenzene-d5	63.7	0	29.3-120		%Rec	1	5/16/2018 5:48:14 PM	38063
Surr: 2-Fluorobiphenyl	70.4	0	17.5-116		%Rec	1	5/16/2018 5:48:14 PM	38063
Surr: 4-Terphenyl-d14	73.4	0	21-92.2		%Rec	1	5/16/2018 5:48:14 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	47	0.31	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Toluene	1.1	0.32	5.0	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
Ethylbenzene	140	0.47	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Methyl tert-butyl ether (MTBE)	7400	12	50		µg/L	50	5/11/2018 3:13:00 PM	R51242
1,2,4-Trimethylbenzene	1.4	0.56	5.0	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Naphthalene	2.4	0.57	10	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
1-Methylnaphthalene	3.2	0.80	20	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
2-Methylnaphthalene	ND	0.76	20		µg/L	5	5/11/2018 3:38:00 PM	R51242
Acetone	ND	4.1	50		µg/L	5	5/11/2018 3:38:00 PM	R51242
Bromobenzene	ND	0.70	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Bromoform	ND	1.1	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Bromomethane	ND	1.3	15		µg/L	5	5/11/2018 3:38:00 PM	R51242
2-Butanone	ND	5.7	50		µg/L	5	5/11/2018 3:38:00 PM	R51242
Carbon disulfide	ND	2.0	50		µg/L	5	5/11/2018 3:38:00 PM	R51242
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Chloroethane	ND	1.2	10		µg/L	5	5/11/2018 3:38:00 PM	R51242
Chloroform	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Chloromethane	ND	1.5	15		µg/L	5	5/11/2018 3:38:00 PM	R51242
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/11/2018 3:38:00 PM	R51242
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.45	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
2-Hexanone	ND	3.3	50		µg/L	5	5/11/2018 3:38:00 PM	R51242
Isopropylbenzene	7.2	0.26	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/11/2018 3:38:00 PM	R51242
Methylene Chloride	ND	0.54	15		µg/L	5	5/11/2018 3:38:00 PM	R51242
n-Butylbenzene	ND	0.65	15		µg/L	5	5/11/2018 3:38:00 PM	R51242
n-Propylbenzene	9.1	0.37	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
sec-Butylbenzene	1.5	0.55	5.0	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
Styrene	ND	0.78	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/11/2018 3:38:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/11/2018 3:38:00 PM	R51242
Vinyl chloride	ND	0.89	5.0		µg/L	5	5/11/2018 3:38:00 PM	R51242
Xylenes, Total	2.0	1.6	7.5	J	µg/L	5	5/11/2018 3:38:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	5	5/11/2018 3:38:00 PM	R51242
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	5	5/11/2018 3:38:00 PM	R51242
Surr: Dibromofluoromethane	108	0	70-130		%Rec	5	5/11/2018 3:38:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 9:30:00 AM
Lab ID: 1805323-011 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	5	5/11/2018 3:38:00 PM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	7.1	0.097	0.50		mg/L	10	5/7/2018 8:28:13 PM	R51096
Surr: BFB	106	0	70-130		%Rec	10	5/7/2018 8:28:13 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	9.3	0.63	1.0		mg/L	1	5/11/2018 9:16:59 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 9:16:59 PM	38012
Surr: DNOP	132	0	76.7-135		%Rec	1	5/11/2018 9:16:59 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/4/2018 7:47:22 PM	R51063
Chloride	130	0.59	10		mg/L	20	5/4/2018 7:59:47 PM	R51063
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/4/2018 7:47:22 PM	R51063
Bromide	1.3	0.13	0.50		mg/L	5	5/4/2018 7:47:22 PM	R51063
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/4/2018 7:47:22 PM	R51063
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/4/2018 7:47:22 PM	R51063
Sulfate	1.2	1.0	2.5	J	mg/L	5	5/4/2018 7:47:22 PM	R51063
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	1.8	0.0049	0.010		mg/L	5	5/23/2018 11:55:57 AM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:52:00 PM	B51451
Calcium	140	0.39	5.0		mg/L	5	5/23/2018 11:55:57 AM	A51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:52:00 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:52:00 PM	B51451
Iron	10	0.33	0.40	*	mg/L	20	5/23/2018 11:58:03 AM	A51452
Magnesium	28	0.25	1.0		mg/L	1	5/22/2018 10:52:00 PM	B51451
Manganese	2.4	0.0020	0.010	*	mg/L	5	5/23/2018 11:55:57 AM	A51452
Potassium	0.68	0.11	1.0	J	mg/L	1	5/22/2018 10:52:00 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:52:00 PM	B51451
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 11:55:57 AM	A51452
Zinc	0.0042	0.0021	0.010	J	mg/L	1	5/23/2018 11:53:58 AM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	1.8	0.0050	0.010		mg/L	5	5/22/2018 6:18:38 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:42:41 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:42:41 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:16:36 PM	38191
Iron	11	0.20	0.40	*	mg/L	20	5/23/2018 6:28:47 PM	38191
Manganese	2.4	0.0055	0.010	*	mg/L	5	5/22/2018 6:18:38 PM	38191
Silver	0.0015	0.0012	0.0050	J	mg/L	1	5/22/2018 6:16:36 PM	38191
Zinc	0.0063	0.0033	0.010	J	mg/L	1	5/22/2018 6:16:36 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.015	0.00042	0.0010	*	mg/L	1	5/16/2018 5:10:34 PM	B51316
Lead	0.0017	0.00017	0.00050		mg/L	1	5/16/2018 5:10:34 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 5:10:34 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.00030	0.000096	0.00050	J	mg/L	1	5/16/2018 5:10:34 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.014	0.00041	0.0010	*	mg/L	1	5/18/2018 11:43:35 AM	38191
Lead	0.0047	0.00023	0.00050		mg/L	1	5/18/2018 11:43:35 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:43:35 AM	38191
Uranium	0.00073	0.000068	0.00050		mg/L	1	5/18/2018 11:43:35 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:01:41 PM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/16/2018 6:16:49 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 6:16:49 PM	38063
1-Methylnaphthalene	91	7.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2-Methylnaphthalene	170	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 6:16:49 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 6:16:49 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Naphthalene	240	10	20		µg/L	2	5/18/2018 7:56:50 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 6:16:49 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 6:16:49 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Phenol	13	6.0	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 6:16:49 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 6:16:49 PM	38063
Surr: 2-Fluorophenol	29.8	0	15-114		%Rec	1	5/16/2018 6:16:49 PM	38063
Surr: Phenol-d5	37.1	0	15-97.9		%Rec	1	5/16/2018 6:16:49 PM	38063
Surr: 2,4,6-Tribromophenol	78.8	0	15-161		%Rec	1	5/16/2018 6:16:49 PM	38063
Surr: Nitrobenzene-d5	62.8	0	29.3-120		%Rec	1	5/16/2018 6:16:49 PM	38063
Surr: 2-Fluorobiphenyl	72.3	0	17.5-116		%Rec	1	5/16/2018 6:16:49 PM	38063
Surr: 4-Terphenyl-d14	74.7	0	21-92.2		%Rec	1	5/16/2018 6:16:49 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2000	3.1	50		µg/L	50	5/11/2018 4:02:00 PM	R51242
Toluene	5.7	0.32	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Ethylbenzene	870	4.7	50		µg/L	50	5/11/2018 4:02:00 PM	R51242
Methyl tert-butyl ether (MTBE)	11000	120	500		µg/L	500	5/14/2018 3:20:00 PM	R51274
1,2,4-Trimethylbenzene	780	5.6	50		µg/L	50	5/11/2018 4:02:00 PM	R51242
1,3,5-Trimethylbenzene	100	0.44	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Naphthalene	580	5.7	100		µg/L	50	5/11/2018 4:02:00 PM	R51242
1-Methylnaphthalene	220	0.80	20		µg/L	5	5/11/2018 4:26:00 PM	R51242
2-Methylnaphthalene	320	0.76	20		µg/L	5	5/11/2018 4:26:00 PM	R51242
Acetone	ND	4.1	50		µg/L	5	5/11/2018 4:26:00 PM	R51242
Bromobenzene	ND	0.70	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Bromoform	ND	1.1	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Bromomethane	ND	1.3	15		µg/L	5	5/11/2018 4:26:00 PM	R51242
2-Butanone	ND	5.7	50		µg/L	5	5/11/2018 4:26:00 PM	R51242
Carbon disulfide	ND	2.0	50		µg/L	5	5/11/2018 4:26:00 PM	R51242
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Chloroethane	ND	1.2	10		µg/L	5	5/11/2018 4:26:00 PM	R51242
Chloroform	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Chloromethane	ND	1.5	15		µg/L	5	5/11/2018 4:26:00 PM	R51242
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
cis-1,2-DCE	2.0	1.0	5.0	J	µg/L	5	5/11/2018 4:26:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/11/2018 4:26:00 PM	R51242
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.45	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
2-Hexanone	ND	3.3	50		µg/L	5	5/11/2018 4:26:00 PM	R51242
Isopropylbenzene	41	0.26	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
4-Isopropyltoluene	6.0	0.48	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/11/2018 4:26:00 PM	R51242
Methylene Chloride	ND	0.54	15		µg/L	5	5/11/2018 4:26:00 PM	R51242
n-Butylbenzene	15	0.65	15	J	µg/L	5	5/11/2018 4:26:00 PM	R51242
n-Propylbenzene	120	0.37	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
sec-Butylbenzene	7.8	0.55	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Styrene	ND	0.78	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/11/2018 4:26:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/11/2018 4:26:00 PM	R51242
Vinyl chloride	ND	0.89	5.0		µg/L	5	5/11/2018 4:26:00 PM	R51242
Xylenes, Total	820	1.6	7.5		µg/L	5	5/11/2018 4:26:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	5/11/2018 4:26:00 PM	R51242
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	5	5/11/2018 4:26:00 PM	R51242
Surr: Dibromofluoromethane	109	0	70-130		%Rec	5	5/11/2018 4:26:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:00:00 AM
Lab ID: 1805323-012 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	5	5/11/2018 4:26:00 PM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	23	0.19	1.0		mg/L	20	5/7/2018 8:51:18 PM	R51096
Surr: BFB	87.8	0	70-130		%Rec	20	5/7/2018 8:51:18 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.4	0.63	1.0		mg/L	1	5/11/2018 9:39:13 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 9:39:13 PM	38012
Surr: DNOP	106	0	76.7-135		%Rec	1	5/11/2018 9:39:13 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.49	0.030	0.10		mg/L	1	5/21/2018 2:11:52 PM	R51417
Chloride	230	0.59	10		mg/L	20	5/4/2018 8:24:37 PM	R51063
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 8:12:12 PM	R51063
Bromide	1.1	0.027	0.10		mg/L	1	5/4/2018 8:12:12 PM	R51063
Nitrogen, Nitrate (As N)	0.051	0.0066	0.10	J	mg/L	1	5/4/2018 8:12:12 PM	R51063
Phosphorus, Orthophosphate (As P)	1.4	0.093	0.50		mg/L	1	5/4/2018 8:12:12 PM	R51063
Sulfate	0.41	0.21	0.50	J	mg/L	1	5/4/2018 8:12:12 PM	R51063
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	2.1	0.0049	0.010	*	mg/L	5	5/23/2018 12:02:21 PM	A51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:54:04 PM	B51451
Calcium	94	0.078	1.0		mg/L	1	5/22/2018 10:54:04 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:54:04 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:54:04 PM	B51451
Iron	0.41	0.016	0.020	*	mg/L	1	5/23/2018 12:00:15 PM	A51452
Magnesium	24	0.25	1.0		mg/L	1	5/22/2018 10:54:04 PM	B51451
Manganese	2.2	0.0020	0.010	*	mg/L	5	5/23/2018 12:02:21 PM	A51452
Potassium	0.52	0.11	1.0	J	mg/L	1	5/22/2018 10:54:04 PM	B51451
Silver	0.0019	0.0018	0.0050	J	mg/L	1	5/22/2018 10:54:04 PM	B51451
Sodium	300	0.82	5.0		mg/L	5	5/23/2018 12:02:21 PM	A51452
Zinc	0.0058	0.0021	0.010	J	mg/L	1	5/23/2018 12:00:15 PM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.1	0.0050	0.010	*	mg/L	5	5/22/2018 6:24:58 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/21/2018 4:44:39 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/21/2018 4:44:39 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:22:56 PM	38191
Iron	1.9	0.051	0.10	*	mg/L	5	5/22/2018 6:24:58 PM	38191
Manganese	2.2	0.0055	0.010	*	mg/L	5	5/22/2018 6:24:58 PM	38191
Silver	0.0014	0.0012	0.0050	J	mg/L	1	5/22/2018 6:22:56 PM	38191
Zinc	0.0051	0.0033	0.010	J	mg/L	1	5/22/2018 6:22:56 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	5/16/2018 5:12:57 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 5:12:57 PM	B51316
Selenium	ND	0.00076	0.0010		mg/L	1	5/16/2018 5:12:57 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.00064	0.000096	0.00050		mg/L	1	5/16/2018 5:12:57 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0021	0.00041	0.0010		mg/L	1	5/18/2018 11:48:19 AM	38191
Lead	0.00051	0.00023	0.00050		mg/L	1	5/18/2018 11:48:19 AM	38191
Selenium	ND	0.00098	0.0010		mg/L	1	5/18/2018 11:48:19 AM	38191
Uranium	0.00074	0.000068	0.00050		mg/L	1	5/18/2018 11:48:19 AM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 12:03:55 PM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Benzoic acid	16	6.3	20	J	µg/L	1	5/16/2018 6:45:40 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 6:45:40 PM	38063
1-Methylnaphthalene	43	7.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Methylnaphthalene	14	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 6:45:40 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 6:45:40 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Naphthalene	10	5.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 6:45:40 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 6:45:40 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 6:45:40 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 6:45:40 PM	38063
Surr: 2-Fluorophenol	32.5	0	15-114		%Rec	1	5/16/2018 6:45:40 PM	38063
Surr: Phenol-d5	24.7	0	15-97.9		%Rec	1	5/16/2018 6:45:40 PM	38063
Surr: 2,4,6-Tribromophenol	63.4	0	15-161		%Rec	1	5/16/2018 6:45:40 PM	38063
Surr: Nitrobenzene-d5	47.2	0	29.3-120		%Rec	1	5/16/2018 6:45:40 PM	38063
Surr: 2-Fluorobiphenyl	51.1	0	17.5-116		%Rec	1	5/16/2018 6:45:40 PM	38063
Surr: 4-Terphenyl-d14	60.0	0	21-92.2		%Rec	1	5/16/2018 6:45:40 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	110	0.12	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Toluene	ND	0.13	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Ethylbenzene	14	0.19	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Methyl tert-butyl ether (MTBE)	140	0.48	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2,4-Trimethylbenzene	0.68	0.23	2.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.17	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.26	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Naphthalene	30	0.23	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1-Methylnaphthalene	130	0.32	8.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
2-Methylnaphthalene	37	0.30	8.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Acetone	ND	1.6	20		µg/L	2	5/11/2018 4:51:00 PM	R51242
Bromobenzene	ND	0.28	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Bromodichloromethane	ND	0.35	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Bromoform	ND	0.42	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Bromomethane	ND	0.51	6.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
2-Butanone	ND	2.3	20		µg/L	2	5/11/2018 4:51:00 PM	R51242
Carbon disulfide	ND	0.80	20		µg/L	2	5/11/2018 4:51:00 PM	R51242
Carbon Tetrachloride	ND	0.22	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Chlorobenzene	ND	0.21	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Chloroethane	ND	0.47	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Chloroform	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Chloromethane	ND	0.59	6.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
cis-1,2-DCE	3.2	0.41	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.16	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	2.8	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Dibromochloromethane	ND	0.14	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.18	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2-Dichlorobenzene	ND	0.18	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,3-Dichlorobenzene	ND	0.30	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1-Dichloroethene	0.62	0.16	2.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2-Dichloropropane	ND	0.20	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,3-Dichloropropane	ND	0.33	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
2,2-Dichloropropane	ND	0.31	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1-Dichloropropene	ND	0.19	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
2-Hexanone	ND	1.3	20		µg/L	2	5/11/2018 4:51:00 PM	R51242
Isopropylbenzene	2.7	0.10	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
4-Isopropyltoluene	0.32	0.19	2.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
4-Methyl-2-pentanone	ND	1.4	20		µg/L	2	5/11/2018 4:51:00 PM	R51242
Methylene Chloride	ND	0.22	6.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
n-Butylbenzene	1.3	0.26	6.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
n-Propylbenzene	3.4	0.15	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
sec-Butylbenzene	1.8	0.22	2.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
Styrene	ND	0.31	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
tert-Butylbenzene	0.25	0.21	2.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.21	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.27	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.26	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.44	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.23	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.28	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1,1-Trichloroethane	ND	0.15	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,1,2-Trichloroethane	ND	0.28	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Trichloroethene (TCE)	ND	0.22	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Trichlorofluoromethane	ND	0.37	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
1,2,3-Trichloropropane	ND	0.78	4.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Vinyl chloride	ND	0.36	2.0		µg/L	2	5/11/2018 4:51:00 PM	R51242
Xylenes, Total	0.73	0.64	3.0	J	µg/L	2	5/11/2018 4:51:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	2	5/11/2018 4:51:00 PM	R51242
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	2	5/11/2018 4:51:00 PM	R51242
Surr: Dibromofluoromethane	105	0	70-130		%Rec	2	5/11/2018 4:51:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018 10:50:00 AM
Lab ID: 1805323-013 **Matrix:** AQUEOUS **Received Date:** 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	2	5/11/2018 4:51:00 PM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.80	0.0097	0.050		mg/L	1	5/7/2018 9:14:16 PM	R51096
Surr: BFB	106	0	70-130		%Rec	1	5/7/2018 9:14:16 PM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 10:01:31 PM	38012
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 10:01:31 PM	38012
Surr: DNOP	101	0	76.7-135		%Rec	1	5/11/2018 10:01:31 PM	38012
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.31	0.030	0.10		mg/L	1	5/21/2018 2:24:44 PM	R51417
Chloride	240	0.59	10		mg/L	20	5/4/2018 9:14:15 PM	R51063
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/4/2018 9:01:50 PM	R51063
Bromide	1.2	0.027	0.10		mg/L	1	5/4/2018 9:01:50 PM	R51063
Nitrogen, Nitrate (As N)	8.6	0.13	2.0		mg/L	20	5/4/2018 9:14:15 PM	R51063
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/4/2018 9:01:50 PM	R51063
Sulfate	260	4.1	10		mg/L	20	5/4/2018 9:14:15 PM	R51063
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.050	0.00099	0.0020		mg/L	1	5/22/2018 10:56:15 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:56:15 PM	B51451
Calcium	65	0.078	1.0		mg/L	1	5/22/2018 10:56:15 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 10:56:15 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:56:15 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 12:04:38 PM	A51452
Magnesium	14	0.25	1.0		mg/L	1	5/22/2018 10:56:15 PM	B51451
Manganese	0.00086	0.00039	0.0020	J	mg/L	1	5/22/2018 10:56:15 PM	B51451
Potassium	1.2	0.11	1.0		mg/L	1	5/22/2018 10:56:15 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 10:56:15 PM	B51451
Sodium	380	0.82	5.0		mg/L	5	5/23/2018 12:06:43 PM	A51452
Zinc	0.0064	0.0021	0.010	J	mg/L	1	5/23/2018 12:04:38 PM	A51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.055	0.0010	0.0020		mg/L	1	5/22/2018 6:33:47 PM	38191
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 6:33:47 PM	38191
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 6:33:47 PM	38191
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:33:47 PM	38191
Iron	0.060	0.010	0.020		mg/L	1	5/22/2018 6:33:47 PM	38191
Manganese	0.0017	0.0011	0.0020	J	mg/L	1	5/22/2018 6:33:47 PM	38191
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 6:33:47 PM	38191
Zinc	0.0042	0.0033	0.010	J	mg/L	1	5/22/2018 6:33:47 PM	38191
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	5/16/2018 5:15:22 PM	B51316
Lead	ND	0.00017	0.00050		mg/L	1	5/16/2018 5:15:22 PM	B51316
Selenium	0.0028	0.00076	0.0010		mg/L	1	5/16/2018 5:15:22 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.036	0.00048	0.0025	*	mg/L	5	5/16/2018 5:32:02 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0014	0.00041	0.0010		mg/L	1	5/18/2018 11:53:02 AM	38191
Lead	ND	0.00023	0.00050		mg/L	1	5/18/2018 11:53:02 AM	38191
Selenium	0.0026	0.00098	0.0010		mg/L	1	5/18/2018 11:53:02 AM	38191
Uranium	0.038	0.00034	0.0025	*	mg/L	5	5/18/2018 12:12:00 PM	38191
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.00037	0.000037	0.00020		mg/L	1	5/22/2018 12:06:08 PM	38216
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Benzoic acid	13	6.3	20	J	µg/L	1	5/16/2018 7:14:36 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 7:14:36 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 7:14:36 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 7:14:36 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 7:14:36 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 7:14:36 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 7:14:36 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 7:14:36 PM	38063
Surr: 2-Fluorophenol	38.6	0	15-114		%Rec	1	5/16/2018 7:14:36 PM	38063
Surr: Phenol-d5	28.7	0	15-97.9		%Rec	1	5/16/2018 7:14:36 PM	38063
Surr: 2,4,6-Tribromophenol	58.2	0	15-161		%Rec	1	5/16/2018 7:14:36 PM	38063
Surr: Nitrobenzene-d5	59.7	0	29.3-120		%Rec	1	5/16/2018 7:14:36 PM	38063
Surr: 2-Fluorobiphenyl	57.4	0	17.5-116		%Rec	1	5/16/2018 7:14:36 PM	38063
Surr: 4-Terphenyl-d14	59.1	0	21-92.2		%Rec	1	5/16/2018 7:14:36 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Toluene	ND	0.064	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Methyl tert-butyl ether (MTBE)	0.91	0.24	1.0	J	µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Naphthalene	ND	0.11	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Acetone	ND	0.82	10		µg/L	1	5/14/2018 3:44:00 PM	R51274
Bromobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Bromoform	ND	0.21	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Bromomethane	ND	0.26	3.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
2-Butanone	ND	1.1	10		µg/L	1	5/14/2018 3:44:00 PM	R51274
Carbon disulfide	ND	0.40	10		µg/L	1	5/14/2018 3:44:00 PM	R51274
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Chloroethane	ND	0.23	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Chloroform	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Chloromethane	ND	0.29	3.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1-Dichloroethene	1.5	0.081	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
2-Hexanone	ND	0.66	10		µg/L	1	5/14/2018 3:44:00 PM	R51274
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2018 3:44:00 PM	R51274
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Styrene	ND	0.16	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Trichloroethene (TCE)	2.8	0.11	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2018 3:44:00 PM	R51274
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/14/2018 3:44:00 PM	R51274
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/14/2018 3:44:00 PM	R51274
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/14/2018 3:44:00 PM	R51274
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/14/2018 3:44:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/4/2018
Lab ID: 1805323-014
Matrix: AQUEOUS
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/14/2018 3:44:00 PM	R51274
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/8/2018 10:00:47 AM	R51096
Surr: BFB	104	0	70-130		%Rec	1	5/8/2018 10:00:47 AM	R51096

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805323-015
Matrix: TRIP BLANK
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Acetone	ND	0.82	10		µg/L	1	5/11/2018 6:03:00 PM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/11/2018 6:03:00 PM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/11/2018 6:03:00 PM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805323-015
Matrix: TRIP BLANK
Received Date: 5/4/2018 2:35:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/11/2018 6:03:00 PM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/11/2018 6:03:00 PM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/11/2018 6:03:00 PM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/11/2018 6:03:00 PM	R51242
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/11/2018 6:03:00 PM	R51242
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/11/2018 6:03:00 PM	R51242
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/11/2018 6:03:00 PM	R51242
Surr: Toluene-d8	113	0	70-130		%Rec	1	5/11/2018 6:03:00 PM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675162** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	0.17	1.0								J

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Cadmium	0.0023	0.0020	0.002000	0	113	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0060	0.0060	0.006000	0	101	50	150			
Copper	0.0044	0.0060	0.006000	0	73.0	50	150			J
Magnesium	0.48	1.0	0.5000	0	95.1	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.48	1.0	0.5000	0	95.7	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J
Sodium	0.63	1.0	0.5000	0	126	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675172** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.5	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	54	1.0	50.00	0	108	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	50	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675172** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	49	1.0	50.00	0	98.4	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Calcium	0.34	1.0								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675222** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Calcium	0.53	1.0	0.5000	0	105	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.8	50	150			J
Copper	0.0052	0.0060	0.006000	0	86.8	50	150			J
Iron	0.018	0.020	0.02000	0	88.6	50	150			J
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.50	1.0	0.5000	0	101	50	150			J
Silver	0.0046	0.0050	0.005000	0	91.8	50	150			J
Sodium	0.49	1.0	0.5000	0	97.9	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Calcium	53	1.0	50.00	0	107	85	115			
Chromium	0.49	0.0060	0.5000	0	97.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	54	1.0	50.00	0	108	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Potassium	53	1.0	50.00	0	107	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	53	1.0	50.00	0	106	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1675594** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1675595** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	95.6	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	95.5	85	115			

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1675596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LLLCS-A**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **A51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1675596**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.49	1.0	0.5000	0	98.1	50	150			J
Iron	0.018	0.020	0.02000	0	91.0	50	150			J
Manganese	0.0020	0.0020	0.002000	0	99.5	50	150			J
Sodium	0.40	1.0	0.5000	0	80.5	50	150			J
Zinc	0.0045	0.010	0.005000	0	90.2	50	150			J

Sample ID	**1805323-001EMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**EB05**	Batch ID: **A51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1675692**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	70	130			
Zinc	0.49	0.010	0.5000	0.007680	96.3	70	130			

Sample ID	**1805323-001EMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**EB05**	Batch ID: **A51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1675693**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.2	70	130	1.89	20	
Zinc	0.48	0.010	0.5000	0.007680	94.8	70	130	1.60	20	

Sample ID	**1805323-008EMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**FB06**	Batch ID: **A51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1675875**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	101	70	130			
Zinc	0.51	0.010	0.5000	0.007300	101	70	130			

Sample ID	**1805323-008EMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**FB06**	Batch ID: **A51452**		RunNo: **51452**						
Prep Date:		Analysis Date: **5/23/2018**		SeqNo: **1675876**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	101	70	130	0.271	20	
Zinc	0.50	0.010	0.5000	0.007300	98.4	70	130	2.40	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-38191**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38191**	RunNo: **51409**
Prep Date: **5/17/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673652** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38191**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38191**	RunNo: **51409**
Prep Date: **5/17/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Chromium	0.0059	0.0060	0.006000	0	97.7	50	150			J
Copper	0.0052	0.0060	0.006000	0	87.2	50	150			J
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0047	0.0050	0.005000	0	94.8	50	150			J
Zinc	0.0062	0.010	0.005000	0	124	50	150			J

Sample ID **LCS-38191**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38191**	RunNo: **51409**
Prep Date: **5/17/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.49	0.020	0.5000	0	97.1	85	115			
Manganese	0.48	0.0020	0.5000	0	95.1	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.48	0.010	0.5000	0	95.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805323-001FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**EB05**	Batch ID: **38191**			RunNo: **51409**					
Prep Date:	**5/17/2018**	Analysis Date: **5/21/2018**			SeqNo: **1673705**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.9	70	130			
Cadmium	0.47	0.0020	0.5000	0	93.1	70	130			
Chromium	0.46	0.0060	0.5000	0	92.0	70	130			
Silver	0.10	0.0050	0.1000	0	101	70	130			
Zinc	0.46	0.010	0.5000	0	91.1	70	130			

Sample ID	**1805323-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**EB05**	Batch ID: **38191**			RunNo: **51409**					
Prep Date:	**5/17/2018**	Analysis Date: **5/21/2018**			SeqNo: **1673706**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	90.5	70	130	1.54	20	
Cadmium	0.46	0.0020	0.5000	0	92.3	70	130	0.870	20	
Chromium	0.45	0.0060	0.5000	0	89.7	70	130	2.53	20	
Silver	0.099	0.0050	0.1000	0	98.8	70	130	2.16	20	
Zinc	0.45	0.010	0.5000	0	89.8	70	130	1.37	20	

Sample ID	**1805323-009FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**EB06**	Batch ID: **38191**			RunNo: **51409**					
Prep Date:	**5/17/2018**	Analysis Date: **5/21/2018**			SeqNo: **1673718**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	90.1	70	130			
Cadmium	0.46	0.0020	0.5000	0	92.5	70	130			
Chromium	0.45	0.0060	0.5000	0	90.3	70	130			

Sample ID	**1805323-009FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**EB06**	Batch ID: **38191**			RunNo: **51409**					
Prep Date:	**5/17/2018**	Analysis Date: **5/21/2018**			SeqNo: **1673719**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	90.1	70	130	0.0688	20	
Cadmium	0.47	0.0020	0.5000	0	93.1	70	130	0.634	20	
Chromium	0.45	0.0060	0.5000	0	90.8	70	130	0.596	20	

Sample ID	**1805323-001FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**EB05**	Batch ID: **38191**			RunNo: **51451**					
Prep Date:	**5/17/2018**	Analysis Date: **5/22/2018**			SeqNo: **1675289**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805323-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EB05**	Batch ID:	**38191**		RunNo:	**51451**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/22/2018**		SeqNo:	**1675289**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.52	0.0060	0.5000	0	105	70	130			
Iron	0.53	0.020	0.5000	0	106	70	130			
Manganese	0.51	0.0020	0.5000	0	103	70	130			

Sample ID	**1805323-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EB05**	Batch ID:	**38191**		RunNo:	**51451**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/22/2018**		SeqNo:	**1675290**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	102	70	130	14.6	20	
Iron	0.52	0.020	0.5000	0	104	70	130	12.5	20	
Manganese	0.50	0.0020	0.5000	0	99.6	70	130	15.2	20	

Sample ID	**1805323-009FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EB06**	Batch ID:	**38191**		RunNo:	**51451**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/22/2018**		SeqNo:	**1675312**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	102	70	130			
Iron	0.52	0.020	0.5000	0	103	70	130			
Manganese	0.51	0.0020	0.5000	0	101	70	130			
Silver	0.10	0.0050	0.1000	0	104	70	130			
Zinc	0.49	0.010	0.5000	0	98.5	70	130			

Sample ID	**1805323-009FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EB06**	Batch ID:	**38191**		RunNo:	**51451**				
Prep Date:	**5/17/2018**	Analysis Date:	**5/22/2018**		SeqNo:	**1675313**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.52	0.0060	0.5000	0	104	70	130	1.73	20	
Iron	0.52	0.020	0.5000	0	105	70	130	1.31	20	
Manganese	0.51	0.0020	0.5000	0	102	70	130	1.08	20	
Silver	0.11	0.0050	0.1000	0	107	70	130	2.95	20	
Zinc	0.50	0.010	0.5000	0	101	70	130	2.13	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.1	50	150			J
Selenium	0.00095	0.0010	0.001000	0	94.6	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.2	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669005** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	96.5	85	115			

Sample ID **1805323-002EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB05**	Batch ID: **A51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.9	70	130			
Lead	0.012	0.00050	0.01250	0	98.6	70	130			
Selenium	0.024	0.0010	0.02500	0	97.1	70	130			
Uranium	0.013	0.00050	0.01250	0	101	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669459** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.0	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	101	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669460** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.025	0.0010	0.02500	0	99.1	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID **1805323-007EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUP05**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.029	0.0010	0.02500	0.001386	111	70	130			
Lead	0.0098	0.00050	0.01250	0	78.1	70	130			
Selenium	0.026	0.0010	0.02500	0	106	70	130			

Sample ID **1805323-007EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUP05**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669469** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001386	101	70	130	8.56	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805323-007EMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**DUP05**	Batch ID:	**B51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669469**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.0089	0.00050	0.01250	0	71.4	70	130	8.90	20	
Selenium	0.024	0.0010	0.02500	0	97.7	70	130	8.18	20	

Sample ID	**1805323-007EMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**DUP05**	Batch ID:	**B51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669482**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.086	0.0025	0.06250	0.02560	96.5	70	130			

Sample ID	**1805323-007EMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**DUP05**	Batch ID:	**B51316**		RunNo:	**51316**				
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669483**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.086	0.0025	0.06250	0.02560	96.8	70	130	0.155	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38191**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671500**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38191**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671501**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	105	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Uranium	0.00051	0.00050	0.0005000	0	101	50	150			

Sample ID	**MSLCS-38191**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671502**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.025	0.0010	0.02500	0	98.4	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID	**1805323-002FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB05**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671505**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	70	130			
Lead	0.012	0.00050	0.01250	0	98.5	70	130			
Selenium	0.024	0.0010	0.02500	0	96.5	70	130			
Uranium	0.013	0.00050	0.01250	0	100	70	130			

Sample ID	**1805323-002FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB05**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671506**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805323-002FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB05**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671506**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.8	70	130	0.812	20	
Lead	0.012	0.00050	0.01250	0	97.7	70	130	0.814	20	
Selenium	0.024	0.0010	0.02500	0	96.4	70	130	0.150	20	
Uranium	0.012	0.00050	0.01250	0	96.3	70	130	3.98	20	

Sample ID	**1805323-010FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-34**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671519**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0010	0.02500	0.001518	116	70	130			
Lead	0.011	0.00050	0.01250	0.0003276	87.9	70	130			
Selenium	0.030	0.0010	0.02500	0.002704	109	70	130			

Sample ID	**1805323-010FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-34**	Batch ID:	**38191**	RunNo:	**51372**					
Prep Date:	**5/17/2018**	Analysis Date:	**5/18/2018**	SeqNo:	**1671528**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.050	0.0025	0.01250	0.03698	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38216**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38216**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673904**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-38216**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38216**	RunNo:	**51428**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673905**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51062**	RunNo: **51062**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658361** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.14	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51062**	RunNo: **51062**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658362** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Chloride	4.7	0.50	5.000	0	95.0	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.8	90	110			
Bromide	2.4	0.10	2.500	0	96.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.1	90	110			
Sulfate	9.5	0.50	10.00	0	95.1	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51063**	RunNo: **51063**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658395** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.31	0.50								J
Sulfate	0.21	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51063**	RunNo: **51063**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.56	0.10	0.5000	0	111	90	110			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51063**	RunNo: **51063**
Prep Date:	Analysis Date: **5/4/2018**	SeqNo: **1658396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.2	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	98.2	90	110			
Bromide	2.4	0.10	2.500	0	97.7	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.5	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51417**	RunNo: **51417**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673244** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51417**	RunNo: **51417**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38125**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670441**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-38125**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670444**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	95.8	70	130			

Sample ID	**1805323-004BMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-37**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670503**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.13	0.0094	0.09358	0.04482	87.6	26.5	132			

Sample ID	**1805323-004BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-37**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670509**	Units:	**µg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.14	0.0093	0.09309	0.04482	98.4	26.5	132	7.33	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805323-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB05**	Batch ID: **38012**	RunNo: **51216**
Prep Date: **5/9/2018**	Analysis Date: **5/11/2018**	SeqNo: **1664756** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	82.8	143			
Surr: DNOP	0.55		0.5000		110	76.7	135			

Sample ID **1805323-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB05**	Batch ID: **38012**	RunNo: **51216**
Prep Date: **5/9/2018**	Analysis Date: **5/11/2018**	SeqNo: **1664757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	82.8	143	2.94	20	
Surr: DNOP	0.49		0.5000		97.7	76.7	135	0	0	

Sample ID **LCS-38012**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38012**	RunNo: **51216**
Prep Date: **5/9/2018**	Analysis Date: **5/11/2018**	SeqNo: **1664771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	70	130			
Surr: DNOP	0.52		0.5000		105	76.7	135			

Sample ID **MB-38012**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38012**	RunNo: **51216**
Prep Date: **5/9/2018**	Analysis Date: **5/11/2018**	SeqNo: **1664772** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		118	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663211** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	23	1.0	20.00	0	117	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	119	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	0.068	1.0								J
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.13	2.0								J
1-Methylnaphthalene	0.29	4.0								J
2-Methylnaphthalene	0.34	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.15	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51191**	RunNo: **51191**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663212** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665695** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.31	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.12	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID **1805323-009ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB06**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665703** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	60.5	137			
Toluene	24	1.0	20.00	0	118	70	130			
Chlorobenzene	24	1.0	20.00	0	120	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	123	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	112	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **1805323-009amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB06**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	60.5	137	5.72	20	
Toluene	23	1.0	20.00	0	115	70	130	2.32	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805323-009amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB06**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665704** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	23	1.0	20.00	0	116	70	130	3.50	20	
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130	8.40	20	
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130	6.33	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		105	70	130	0	0	
Surr: Toluene-d8	11		10.00		111	70	130	0	0	

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666778** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	120	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38002**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667364** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	83.4	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	83.8	40.5	108			
2-Chlorophenol	150	10	200.0	0	73.3	35	103			
1,4-Dichlorobenzene	64	10	100.0	0	63.5	24.7	93.7			
2,4-Dinitrotoluene	80	10	100.0	0	79.5	35.6	91.4			
N-Nitrosodi-n-propylamine	82	10	100.0	0	81.8	41.6	114			
4-Nitrophenol	130	10	200.0	0	64.1	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.9	25.3	98.5			
Phenol	110	10	200.0	0	54.4	20.9	75.1			
Pyrene	83	10	100.0	0	83.0	45.6	108			
1,2,4-Trichlorobenzene	67	10	100.0	0	66.6	30.3	106			
Surr: 2-Fluorophenol	130		200.0		63.4	15	114			
Surr: Phenol-d5	110		200.0		52.8	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	15	161			
Surr: Nitrobenzene-d5	74		100.0		74.3	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		74.1	17.5	116			
Surr: 4-Terphenyl-d14	150		100.0		150	21	92.2			S

Sample ID **lcsd-38002**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.6	39.7	103	8.50	34.9	
4-Chloro-3-methylphenol	150	10	200.0	0	74.8	40.5	108	11.3	30.2	
2-Chlorophenol	140	10	200.0	0	70.9	35	103	3.34	49.5	
1,4-Dichlorobenzene	63	10	100.0	0	62.6	24.7	93.7	1.40	43.2	
2,4-Dinitrotoluene	72	10	100.0	0	71.8	35.6	91.4	10.2	49.9	
N-Nitrosodi-n-propylamine	75	10	100.0	0	75.0	41.6	114	8.62	42.1	
4-Nitrophenol	130	10	200.0	0	63.6	20.7	74.3	0.752	31.5	
Pentachlorophenol	120	20	200.0	0	60.8	25.3	98.5	29.6	52.5	
Phenol	110	10	200.0	0	56.6	20.9	75.1	4.00	54.4	
Pyrene	71	10	100.0	0	71.2	45.6	108	15.2	30.7	
1,2,4-Trichlorobenzene	67	10	100.0	0	67.4	30.3	106	1.19	48.1	
Surr: 2-Fluorophenol	130		200.0		63.6	15	114	0	0	
Surr: Phenol-d5	110		200.0		54.1	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		74.5	15	161	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.1	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	72		100.0		72.0	17.5	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**lcsd-38002**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**38002**		RunNo:	**51296**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/15/2018**		SeqNo:	**1667365**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	120		100.0		117	21	92.2	0	0	S

Sample ID	**mb-38002**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**38002**		RunNo:	**51296**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/15/2018**		SeqNo:	**1667366**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	10	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38002**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38002**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38002**	RunNo: **51296**
Prep Date: **5/9/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.3	15	114			
Surr: Phenol-d5	130		200.0		64.1	15	97.9			
Surr: 2,4,6-Tribromophenol	130		200.0		67.2	15	161			
Surr: Nitrobenzene-d5	76		100.0		75.5	29.3	120			
Surr: 2-Fluorobiphenyl	78		100.0		78.4	17.5	116			
Surr: 4-Terphenyl-d14	83		100.0		82.6	21	92.2			

Sample ID **1805323-010cms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669302** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	64	10	100.0	0	64.1	15	123			
4-Chloro-3-methylphenol	150	10	200.0	0	72.9	26.6	118			
2-Chlorophenol	130	10	200.0	0	65.9	15	120			
1,4-Dichlorobenzene	52	10	100.0	0	52.1	19	108			
2,4-Dinitrotoluene	68	10	100.0	0	67.8	27.8	103			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.0	32.3	126			
4-Nitrophenol	28	10	200.0	0	14.2	15	72.1			S
Pentachlorophenol	110	20	200.0	0	54.4	15	114			
Phenol	81	10	200.0	0	40.5	15	67.5			
Pyrene	72	10	100.0	0	72.0	31.2	112			
1,2,4-Trichlorobenzene	59	10	100.0	0	58.7	22.1	123			
Surr: 2-Fluorophenol	95		200.0		47.3	15	114			
Surr: Phenol-d5	74		200.0		37.2	15	97.9			
Surr: 2,4,6-Tribromophenol	150		200.0		72.8	15	161			
Surr: Nitrobenzene-d5	65		100.0		64.8	29.3	120			
Surr: 2-Fluorobiphenyl	68		100.0		67.5	17.5	116			
Surr: 4-Terphenyl-d14	64		100.0		64.1	21	92.2			

Sample ID **1805323-010cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669303** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	68.5	15	123	6.70	30.5	
4-Chloro-3-methylphenol	150	10	200.0	0	76.3	26.6	118	4.51	50	
2-Chlorophenol	130	10	200.0	0	65.1	15	120	1.28	36.3	
1,4-Dichlorobenzene	57	10	100.0	0	56.7	19	108	8.46	42.1	
2,4-Dinitrotoluene	69	10	100.0	0	68.7	27.8	103	1.26	28.5	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805323-010cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-34**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669303** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	64	10	100.0	0	63.8	32.3	126	0.376	25.4	
4-Nitrophenol	45	10	200.0	0	22.5	15	72.1	45.7	50	
Pentachlorophenol	130	20	200.0	0	63.8	15	114	15.8	50	
Phenol	76	10	200.0	0	38.2	15	67.5	6.05	46.1	
Pyrene	76	10	100.0	0	76.2	31.2	112	5.64	34.3	
1,2,4-Trichlorobenzene	61	10	100.0	0	61.2	22.1	123	4.17	43.6	
Surr: 2-Fluorophenol	91		200.0		45.6	15	114	0	0	
Surr: Phenol-d5	73		200.0		36.6	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		83.0	15	161	0	0	
Surr: Nitrobenzene-d5	68		100.0		67.6	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		70.2	17.5	116	0	0	
Surr: 4-Terphenyl-d14	74		100.0		74.4	21	92.2	0	0	

Sample ID **lcs-38063**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669313** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.0	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	85.2	40.5	108			
2-Chlorophenol	150	10	200.0	0	76.1	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	67.9	24.7	93.7			
2,4-Dinitrotoluene	79	10	100.0	0	78.7	35.6	91.4			
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.0	41.6	114			
4-Nitrophenol	140	10	200.0	0	70.0	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	79.7	25.3	98.5			
Phenol	130	10	200.0	0	63.6	20.9	75.1			
Pyrene	83	10	100.0	0	82.5	45.6	108			
1,2,4-Trichlorobenzene	77	10	100.0	0	76.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		67.1	15	114			
Surr: Phenol-d5	120		200.0		62.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		89.1	15	161			
Surr: Nitrobenzene-d5	76		100.0		75.7	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	17.5	116			
Surr: 4-Terphenyl-d14	76		100.0		76.4	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	15	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		57.5	15	114			
Surr: Phenol-d5	95		200.0		47.7	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.0	15	161			
Surr: Nitrobenzene-d5	64		100.0		63.8	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.0	17.5	116			
Surr: 4-Terphenyl-d14	71		100.0		71.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805323**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805323-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **EB05**	Batch ID: **R51096**	RunNo: **51096**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659422** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.1	70	130			
Surr: BFB	9.1		10.00		91.5	70	130			

Sample ID **1805323-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **EB05**	Batch ID: **R51096**	RunNo: **51096**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659423** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.0	70	130	3.27	20	
Surr: BFB	9.7		10.00		96.7	70	130	0	0	

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R51096**	RunNo: **51096**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659437** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.7	70	130			
Surr: BFB	9.7		10.00		96.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R51096**	RunNo: **51096**
Prep Date:	Analysis Date: **5/7/2018**	SeqNo: **1659438** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		107	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660947** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	9.4		10.00		94.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R51124**	RunNo: **51124**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1660948** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805323 | RcptNo: 1

Received By: Andy Freeman | 5/4/2018 2:35:00 PM

Completed By: Ashley Gallegos | 5/5/2018 9:43:52 AM

Reviewed By: MW 5/7/18

LB; ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 42 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: ENM

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Yes			
2	2.3	Good	Yes			
3	1.2	Good	Yes			
4	2.3	Good	Yes			
5	3.3	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1805323 RcptNo: 1

Chain-of-Custody Record

Client: Andeavor
Gallup Refinery
Mailing Address: 92 Giant Crossing Road
Gallup, NM 87301
Phone #: 505-722-0287
email or Fax#: Jessica.L.Obrien@Andeavor.com

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other _____
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 2nd Quarter 2018 Groundwater Sampling (MKTF)
Project #:
Project Manager: Jessica O'Brien
Sampler: Tracy Payne
On Ice: ☒ Yes ☐ No
Sample Temperature: 5 Coolers **

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	0850	H_2O	EB05	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
** Cooler temps: 5.4, 2.3, 1.2, 2.3+ 3.3 05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 5 Coolers 5.4, 2.3, 1, 2.2, 3.3, 3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	0930	H_2O	FB05	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/4/18	1435			5/4/18	1435
Date	Time	Relinquished by	Received by	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler temps: 5.4, 2.3, 1, 2.2, 3.3, 3.3

05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	1000	H_2O	MKTF-38	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler temps = 5.4, 2.3, 1.2, 2.3 + 3.3

05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 5 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	1430	H_2O	MKTF-37	40ml VOA-5	HCl	-004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

5 Cooler Temps:
5.4, 3.3, 1.2, 2.3 & 3.3 05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: X Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	1540	H_2O	MKTF-36	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler temps 5.4, 2.3, 1.2, 1.3 & 3.2 05/04/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) **EXCEL**

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	1645	H_2O	MKTF-35~~SB~~	40ml VOA-5	HCl	-006			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Temps: 5.4, 2.3, 1.2, 2.3 & 3.3
05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other _____
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/3/18	—	H_2O	DUP05	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date:	Time:

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
Cooler Temps: 5.4, 2.3, 1.2, 2.3 4 3.3
05/4/18

Chain-of-Custody Record

Client: Andeavor
Gallup Refinery
Mailing Address: 92 Giant Crossing Road
Gallup, NM 87301
Phone #: 505-722-0287
email or Fax#: Jessica.L.Obrien@Andeavor.com
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: 2nd Quarter 2018 Groundwater Sampling (MKTF)
Project #:
Project Manager: Jessica O'Brien
Sampler: Tracy Payne
On Ice: ☑ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	0745	H_2O	FB06	40ml VOA-5	HCl	-008			X							X						
				1 Liter Amber-1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date: 5/4/18 Time: 1435 Relinquished by:
Received by: Date 5/4/18 Time 1435
Date: Time: Relinquished by:
Received by: Date Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
Cooler Temp: 5.4, 2.3, 1.2, 2.3 + 3.3 EFG 05/04/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) **EXCEL**

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	0810	H_2O	EB06	40ml VOA-5	HCl	-009			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
cooler temps 5.4, 2.3, 1.2, 2.3+3.3 05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 5 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	0845	H_2O	MKTF-34	40ml VOA-5	HCl	-010			X							X						
				1 Liter Amber-2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Cooler Temps: 5 4.2.3, 1.2, 2.3433 05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 5 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	0930	H_2O	MKTF-17	40ml VOA-5	HCl	-011			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/4/18	1435			5/4/18	1435
Date	Time	Relinquished by	Received by	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler Temps 5.4, 2.3, 1.2, 2.3 & 3.3 05/04/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 5 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	1000	H_2O	MKTF-19	40ml VOA-5	HCl	-012			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE 05/05/18

5 Coolers Temps: 5.4, 2.3, 1.2, 2.3 + 3.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package

☐ Standard X Level 4 (Full Validation)

☐ Other

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	1050	H_2O	MKTF-18	40ml VOA-5	HCl	-013			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/4/18	1435			5/9/18	1435
Date	Time	Relinquished by	Received by	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** 05/04/18

Cooler temps 5.4, 2.3, 1.2, 2.3 + 3.3

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other
X EDD (Type) EXCEL

Turn-Around Time:
X Standard ☐ Rush
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 5.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805323	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	—	H_2O	DUP06	40ml VOA-5	HCl	-014			X							X						
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/4/18	—	H_2O	TRIP BLANK	40ml VOA3	HCL	-015										X						

Date	Time	Relinquished by:	Received by:	Date	Time
5/4/18	1435			5/4/18	1435
				05/04/18	

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler temps 5, 4.2 3, 1.2, 2.3 + 3.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 07, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling MKTF OrderNo.: 1805416

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/8/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805416**
Date Reported: **6/7/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/16/2018 6:47:07 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/10/2018 9:35:04 PM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2018 9:35:04 PM	38013
Surr: DNOP	108	0	76.7-135		%Rec	1	5/10/2018 9:35:04 PM	38013
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/14/2018 1:05:32 PM	R51272
Chloride	0.11	0.029	0.50	J	mg/L	1	5/14/2018 1:05:32 PM	R51272
Bromide	ND	0.027	0.10		mg/L	1	5/14/2018 1:05:32 PM	R51272
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/14/2018 1:05:32 PM	R51272
Sulfate	ND	0.21	0.50		mg/L	1	5/14/2018 1:05:32 PM	R51272
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:13:37 PM	R51272
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/10/2018 3:16:06 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:16:06 PM	A51175
Calcium	ND	0.078	1.0		mg/L	1	5/10/2018 3:16:06 PM	A51175
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:16:06 PM	A51175
Copper	ND	0.0032	0.0060		mg/L	1	5/10/2018 3:16:06 PM	A51175
Iron	ND	0.016	0.020		mg/L	1	5/10/2018 3:16:06 PM	A51175
Magnesium	ND	0.25	1.0		mg/L	1	5/10/2018 3:16:06 PM	A51175
Manganese	ND	0.00039	0.0020		mg/L	1	5/10/2018 3:16:06 PM	A51175
Potassium	ND	0.11	1.0		mg/L	1	5/23/2018 1:23:41 PM	B51452
Silver	ND	0.0018	0.0050		mg/L	1	5/23/2018 1:23:41 PM	B51452
Sodium	0.29	0.16	1.0	J	mg/L	1	5/10/2018 3:16:06 PM	A51175
Zinc	0.0023	0.0021	0.010	J	mg/L	1	5/10/2018 3:16:06 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/22/2018 6:50:34 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 6:50:34 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 6:50:34 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:50:34 PM	38206
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 6:50:34 PM	38206
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 6:50:34 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 6:50:34 PM	38206
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 6:50:34 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/17/2018 5:53:37 PM	B51361
Lead	ND	0.00017	0.00050		mg/L	1	5/17/2018 5:53:37 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 5:53:37 PM	B51361
Uranium	ND	0.000096	0.00050		mg/L	1	5/17/2018 5:53:37 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/22/2018 1:21:50 PM	38206
Lead	ND	0.00023	0.00050		mg/L	1	5/22/2018 1:21:50 PM	38206
Selenium	ND	0.00098	0.0010		mg/L	1	5/22/2018 1:21:50 PM	38206
Uranium	ND	0.000068	0.00050		mg/L	1	5/22/2018 1:21:50 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000038	0.000037	0.00020	J	mg/L	1	5/22/2018 9:54:50 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzoic acid	20	6.3	20		µg/L	1	5/16/2018 7:43:37 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 7:43:37 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 7:43:37 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 7:43:37 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 7:43:37 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 7:43:37 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 7:43:37 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 7:43:37 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 7:43:37 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 7:43:37 PM	38063
Surr: 2-Fluorophenol	43.8	0	15-114		%Rec	1	5/16/2018 7:43:37 PM	38063
Surr: Phenol-d5	33.0	0	15-97.9		%Rec	1	5/16/2018 7:43:37 PM	38063
Surr: 2,4,6-Tribromophenol	73.4	0	15-161		%Rec	1	5/16/2018 7:43:37 PM	38063
Surr: Nitrobenzene-d5	70.7	0	29.3-120		%Rec	1	5/16/2018 7:43:37 PM	38063
Surr: 2-Fluorobiphenyl	71.6	0	17.5-116		%Rec	1	5/16/2018 7:43:37 PM	38063
Surr: 4-Terphenyl-d14	72.3	0	21-92.2		%Rec	1	5/16/2018 7:43:37 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Acetone	ND	0.82	10		µg/L	1	5/12/2018 12:27:00 AM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/12/2018 12:27:00 AM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/12/2018 12:27:00 AM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/12/2018 12:27:00 AM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/12/2018 12:27:00 AM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/12/2018 12:27:00 AM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/12/2018 12:27:00 AM	R51242
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/12/2018 12:27:00 AM	R51242
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	5/12/2018 12:27:00 AM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 7:50:00 AM
Lab ID: 1805416-001 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/12/2018 12:27:00 AM	R51242
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/12/2018 12:27:00 AM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/9/2018 6:58:36 PM	A51162
Surr: BFB	108	0	70-130		%Rec	1	5/9/2018 6:58:36 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/16/2018 7:02:36 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/10/2018 10:41:59 PM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2018 10:41:59 PM	38013
Surr: DNOP	103	0	76.7-135		%Rec	1	5/10/2018 10:41:59 PM	38013
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/14/2018 1:30:44 PM	R51272
Chloride	0.11	0.029	0.50	J	mg/L	1	5/14/2018 1:30:44 PM	R51272
Bromide	ND	0.027	0.10		mg/L	1	5/14/2018 1:30:44 PM	R51272
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/14/2018 1:30:44 PM	R51272
Sulfate	ND	0.21	0.50		mg/L	1	5/14/2018 1:30:44 PM	R51272
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:26:29 PM	R51272
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/10/2018 3:18:28 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:18:28 PM	A51175
Calcium	ND	0.078	1.0		mg/L	1	5/10/2018 3:18:28 PM	A51175
Chromium	0.0017	0.0013	0.0060	J	mg/L	1	5/10/2018 3:18:28 PM	A51175
Copper	ND	0.0032	0.0060		mg/L	1	5/10/2018 3:18:28 PM	A51175
Iron	ND	0.016	0.020		mg/L	1	5/10/2018 3:18:28 PM	A51175
Magnesium	ND	0.25	1.0		mg/L	1	5/10/2018 3:18:28 PM	A51175
Manganese	ND	0.00039	0.0020		mg/L	1	5/10/2018 3:18:28 PM	A51175
Potassium	ND	0.11	1.0		mg/L	1	5/23/2018 1:25:46 PM	B51452
Silver	ND	0.0018	0.0050		mg/L	1	5/23/2018 1:25:46 PM	B51452
Sodium	ND	0.16	1.0		mg/L	1	5/10/2018 3:18:28 PM	A51175
Zinc	ND	0.0021	0.010		mg/L	1	5/10/2018 3:18:28 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/22/2018 6:52:44 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 6:52:44 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 6:52:44 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 6:52:44 PM	38206
Iron	ND	0.010	0.020		mg/L	1	5/22/2018 6:52:44 PM	38206
Manganese	ND	0.0011	0.0020		mg/L	1	5/22/2018 6:52:44 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 6:52:44 PM	38206
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 6:52:44 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/17/2018 6:00:48 PM	B51361
Lead	ND	0.00017	0.00050		mg/L	1	5/17/2018 6:00:48 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 6:00:48 PM	B51361
Uranium	ND	0.000096	0.00050		mg/L	1	5/17/2018 6:00:48 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/22/2018 1:24:08 PM	38206
Lead	ND	0.00023	0.00050		mg/L	1	5/22/2018 1:24:08 PM	38206
Selenium	ND	0.00098	0.0010		mg/L	1	5/22/2018 1:24:08 PM	38206
Uranium	ND	0.000068	0.00050		mg/L	1	5/22/2018 1:24:08 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000037	0.000037	0.00020	J	mg/L	1	5/22/2018 9:57:08 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Benzoic acid	16	6.3	20	J	µg/L	1	5/16/2018 8:12:29 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 8:12:29 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 8:12:29 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 8:12:29 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 8:12:29 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 8:12:29 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 8:12:29 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 8:12:29 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 8:12:29 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 8:12:29 PM	38063
Surr: 2-Fluorophenol	42.8	0	15-114		%Rec	1	5/16/2018 8:12:29 PM	38063
Surr: Phenol-d5	32.5	0	15-97.9		%Rec	1	5/16/2018 8:12:29 PM	38063
Surr: 2,4,6-Tribromophenol	74.0	0	15-161		%Rec	1	5/16/2018 8:12:29 PM	38063
Surr: Nitrobenzene-d5	63.2	0	29.3-120		%Rec	1	5/16/2018 8:12:29 PM	38063
Surr: 2-Fluorobiphenyl	70.0	0	17.5-116		%Rec	1	5/16/2018 8:12:29 PM	38063
Surr: 4-Terphenyl-d14	77.9	0	21-92.2		%Rec	1	5/16/2018 8:12:29 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Toluene	ND	0.064	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Acetone	ND	0.82	10		µg/L	1	5/12/2018 12:51:00 AM	R51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Bromoform	ND	0.21	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
2-Butanone	ND	1.1	10		µg/L	1	5/12/2018 12:51:00 AM	R51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/12/2018 12:51:00 AM	R51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Chloroform	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Dibromomethane	ND	0.091	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
2-Hexanone	ND	0.66	10		µg/L	1	5/12/2018 12:51:00 AM	R51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/12/2018 12:51:00 AM	R51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Styrene	ND	0.16	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/12/2018 12:51:00 AM	R51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/12/2018 12:51:00 AM	R51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/12/2018 12:51:00 AM	R51242
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/12/2018 12:51:00 AM	R51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 8:30:00 AM
Lab ID: 1805416-002
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/12/2018 12:51:00 AM	R51242
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/12/2018 12:51:00 AM	R51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/9/2018 7:21:38 PM	A51162
Surr: BFB	102	0	70-130		%Rec	1	5/9/2018 7:21:38 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/16/2018 7:18:07 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.1	0.63	1.0		mg/L	1	5/10/2018 11:04:29 PM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2018 11:04:29 PM	38013
Surr: DNOP	112	0	76.7-135		%Rec	1	5/10/2018 11:04:29 PM	38013
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/14/2018 1:56:27 PM	R51272
Chloride	500	1.5	25		mg/L	50	5/21/2018 2:37:36 PM	R51417
Bromide	0.23	0.027	0.10		mg/L	1	5/14/2018 1:56:27 PM	R51272
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/14/2018 1:56:27 PM	R51272
Sulfate	28	0.21	0.50		mg/L	1	5/14/2018 1:56:27 PM	R51272
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:39:21 PM	R51272
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.26	0.00099	0.0020		mg/L	1	5/10/2018 3:20:47 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:20:47 PM	A51175
Calcium	100	0.39	5.0		mg/L	5	5/23/2018 3:28:54 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:20:47 PM	A51175
Copper	0.0073	0.0032	0.0060		mg/L	1	5/10/2018 3:20:47 PM	A51175
Iron	0.75	0.016	0.020	*	mg/L	1	5/10/2018 3:20:47 PM	A51175
Magnesium	22	0.25	1.0		mg/L	1	5/10/2018 3:20:47 PM	A51175
Manganese	2.4	0.0020	0.010	*	mg/L	5	5/23/2018 3:28:54 PM	B51452
Potassium	0.91	0.11	1.0	J	mg/L	1	5/23/2018 1:27:52 PM	B51452
Silver	0.0021	0.0018	0.0050	J	mg/L	1	5/23/2018 1:27:52 PM	B51452
Sodium	560	1.6	10		mg/L	10	5/23/2018 3:31:11 PM	B51452
Zinc	0.0096	0.0021	0.010	J	mg/L	1	5/10/2018 3:20:47 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.33	0.0010	0.0020		mg/L	1	5/22/2018 7:01:22 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 7:01:22 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 7:01:22 PM	38206
Copper	0.0056	0.0041	0.0060	J	mg/L	1	5/22/2018 7:01:22 PM	38206
Iron	2.6	0.051	0.10	*	mg/L	5	5/22/2018 7:03:22 PM	38206
Manganese	2.7	0.0055	0.010	*	mg/L	5	5/22/2018 7:03:22 PM	38206
Silver	0.0015	0.0012	0.0050	J	mg/L	1	5/22/2018 7:01:22 PM	38206
Zinc	0.0039	0.0033	0.010	J	mg/L	1	5/22/2018 7:01:22 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0041	0.00042	0.0010		mg/L	1	5/17/2018 6:07:59 PM	B51361
Lead	ND	0.00017	0.00050		mg/L	1	5/17/2018 6:07:59 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 6:07:59 PM	B51361
Uranium	0.023	0.000096	0.00050		mg/L	1	5/17/2018 6:07:59 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0053	0.00041	0.0010		mg/L	1	5/22/2018 1:26:26 PM	38206
Lead	0.0021	0.00023	0.00050		mg/L	1	5/22/2018 1:26:26 PM	38206
Selenium	ND	0.00098	0.0010		mg/L	1	5/22/2018 1:26:26 PM	38206
Uranium	0.028	0.00034	0.0025		mg/L	5	5/22/2018 2:04:41 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000062	0.000037	0.00020	J	mg/L	1	5/22/2018 9:59:19 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzoic acid	21	6.3	20		µg/L	1	5/16/2018 8:41:10 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 8:41:10 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 8:41:10 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 8:41:10 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 8:41:10 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 8:41:10 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 8:41:10 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Phenol	8.9	6.0	10	J	µg/L	1	5/16/2018 8:41:10 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 8:41:10 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 8:41:10 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 8:41:10 PM	38063
Surr: 2-Fluorophenol	32.0	0	15-114		%Rec	1	5/16/2018 8:41:10 PM	38063
Surr: Phenol-d5	25.3	0	15-97.9		%Rec	1	5/16/2018 8:41:10 PM	38063
Surr: 2,4,6-Tribromophenol	57.3	0	15-161		%Rec	1	5/16/2018 8:41:10 PM	38063
Surr: Nitrobenzene-d5	45.5	0	29.3-120		%Rec	1	5/16/2018 8:41:10 PM	38063
Surr: 2-Fluorobiphenyl	49.0	0	17.5-116		%Rec	1	5/16/2018 8:41:10 PM	38063
Surr: 4-Terphenyl-d14	57.9	0	21-92.2		%Rec	1	5/16/2018 8:41:10 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3400	3.1	50		µg/L	50	5/12/2018 1:15:00 AM	B51242
Toluene	15	0.32	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Ethylbenzene	150	0.47	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Methyl tert-butyl ether (MTBE)	260	1.2	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2,4-Trimethylbenzene	4.6	0.56	5.0	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Naphthalene	4.7	0.57	10	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
1-Methylnaphthalene	5.9	0.80	20	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
2-Methylnaphthalene	ND	0.76	20		µg/L	5	5/12/2018 1:39:00 AM	B51242
Acetone	ND	4.1	50		µg/L	5	5/12/2018 1:39:00 AM	B51242
Bromobenzene	ND	0.70	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Bromoform	ND	1.1	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Bromomethane	ND	1.3	15		µg/L	5	5/12/2018 1:39:00 AM	B51242
2-Butanone	ND	5.7	50		µg/L	5	5/12/2018 1:39:00 AM	B51242
Carbon disulfide	ND	2.0	50		µg/L	5	5/12/2018 1:39:00 AM	B51242
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Chloroethane	ND	1.2	10		µg/L	5	5/12/2018 1:39:00 AM	B51242
Chloroform	ND	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Chloromethane	ND	1.5	15		µg/L	5	5/12/2018 1:39:00 AM	B51242
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
cis-1,2-DCE	53	1.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/12/2018 1:39:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Dibromomethane	ND	0.45	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1-Dichloroethane	230	2.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1-Dichloroethene	110	0.40	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
2-Hexanone	ND	3.3	50		µg/L	5	5/12/2018 1:39:00 AM	B51242
Isopropylbenzene	57	0.26	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
4-Isopropyltoluene	1.4	0.48	5.0	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/12/2018 1:39:00 AM	B51242
Methylene Chloride	ND	0.54	15		µg/L	5	5/12/2018 1:39:00 AM	B51242
n-Butylbenzene	19	0.65	15		µg/L	5	5/12/2018 1:39:00 AM	B51242
n-Propylbenzene	85	0.37	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
sec-Butylbenzene	9.5	0.55	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Styrene	ND	0.78	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/12/2018 1:39:00 AM	B51242
Tetrachloroethene (PCE)	2.7	0.65	5.0	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1,1-Trichloroethane	13	0.36	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Trichloroethene (TCE)	26	0.56	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/12/2018 1:39:00 AM	B51242
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/12/2018 1:39:00 AM	B51242
Vinyl chloride	4.0	0.89	5.0	J	µg/L	5	5/12/2018 1:39:00 AM	B51242
Xylenes, Total	9.0	1.6	7.5		µg/L	5	5/12/2018 1:39:00 AM	B51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	5/12/2018 1:39:00 AM	B51242
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	5	5/12/2018 1:39:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 9:00:00 AM
Lab ID: 1805416-003 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	110	0	70-130		%Rec	5	5/12/2018 1:39:00 AM	B51242
Surr: Toluene-d8	113	0	70-130		%Rec	5	5/12/2018 1:39:00 AM	B51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	12	0.19	1.0		mg/L	20	5/9/2018 11:12:13 PM	A51162
Surr: BFB	108	0	70-130		%Rec	20	5/9/2018 11:12:13 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0096	0.0049	0.0095		µg/L	1	5/16/2018 7:33:42 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/10/2018 11:26:49 PM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/10/2018 11:26:49 PM	38013
Surr: DNOP	104	0	76.7-135		%Rec	1	5/10/2018 11:26:49 PM	38013
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/14/2018 2:22:10 PM	R51272
Chloride	750	1.5	25		mg/L	50	5/21/2018 2:50:28 PM	R51417
Bromide	0.34	0.027	0.10		mg/L	1	5/14/2018 2:22:10 PM	R51272
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/14/2018 2:22:10 PM	R51272
Sulfate	63	4.1	10		mg/L	20	5/14/2018 2:35:03 PM	R51272
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/14/2018 3:52:12 PM	R51272
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.11	0.00099	0.0020		mg/L	1	5/10/2018 3:22:55 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:22:55 PM	A51175
Calcium	130	0.39	5.0		mg/L	5	5/23/2018 3:33:21 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:22:55 PM	A51175
Copper	ND	0.0032	0.0060		mg/L	1	5/10/2018 3:22:55 PM	A51175
Iron	0.036	0.016	0.020		mg/L	1	5/10/2018 3:22:55 PM	A51175
Magnesium	31	0.25	1.0		mg/L	1	5/10/2018 3:22:55 PM	A51175
Manganese	0.030	0.00039	0.0020		mg/L	1	5/10/2018 3:22:55 PM	A51175
Potassium	1.3	0.11	1.0		mg/L	1	5/23/2018 1:29:47 PM	B51452
Silver	0.0052	0.0018	0.0050		mg/L	1	5/23/2018 1:29:47 PM	B51452
Sodium	560	1.6	10		mg/L	10	5/23/2018 3:35:38 PM	B51452
Zinc	0.0037	0.0021	0.010	J	mg/L	1	5/10/2018 3:22:55 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.13	0.0010	0.0020		mg/L	1	5/22/2018 7:05:46 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 7:05:46 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 7:05:46 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	5/22/2018 7:05:46 PM	38206
Iron	0.77	0.010	0.020	*	mg/L	1	5/22/2018 7:05:46 PM	38206
Manganese	0.053	0.0011	0.0020	*	mg/L	1	5/22/2018 7:05:46 PM	38206
Silver	0.0025	0.0012	0.0050	J	mg/L	1	5/22/2018 7:05:46 PM	38206
Zinc	0.0034	0.0033	0.010	J	mg/L	1	5/22/2018 7:05:46 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	5/17/2018 6:10:21 PM	B51361
Lead	ND	0.00017	0.00050		mg/L	1	5/17/2018 6:10:21 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 6:10:21 PM	B51361
Uranium	0.038	0.00048	0.0025	*	mg/L	5	5/21/2018 2:47:28 PM	A51420
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0021	0.0021	0.0050	J	mg/L	5	5/22/2018 2:06:59 PM	38206
Lead	0.00061	0.00023	0.00050		mg/L	1	5/22/2018 1:28:43 PM	38206
Selenium	ND	0.0049	0.0050		mg/L	5	5/22/2018 2:06:59 PM	38206
Uranium	0.044	0.00034	0.0025	*	mg/L	5	5/22/2018 2:06:59 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000041	0.000037	0.00020	J	mg/L	1	5/22/2018 10:01:30 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Benzoic acid	12	6.3	20	J	µg/L	1	5/16/2018 9:09:55 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/16/2018 9:09:55 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/16/2018 9:09:55 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/16/2018 9:09:55 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/16/2018 9:09:55 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/16/2018 9:09:55 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/16/2018 9:09:55 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/16/2018 9:09:55 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/16/2018 9:09:55 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/16/2018 9:09:55 PM	38063
Surr: 2-Fluorophenol	45.5	0	15-114		%Rec	1	5/16/2018 9:09:55 PM	38063
Surr: Phenol-d5	39.6	0	15-97.9		%Rec	1	5/16/2018 9:09:55 PM	38063
Surr: 2,4,6-Tribromophenol	79.3	0	15-161		%Rec	1	5/16/2018 9:09:55 PM	38063
Surr: Nitrobenzene-d5	68.0	0	29.3-120		%Rec	1	5/16/2018 9:09:55 PM	38063
Surr: 2-Fluorobiphenyl	71.0	0	17.5-116		%Rec	1	5/16/2018 9:09:55 PM	38063
Surr: 4-Terphenyl-d14	76.5	0	21-92.2		%Rec	1	5/16/2018 9:09:55 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.99	0.062	1.0	J	µg/L	1	5/14/2018 4:32:00 PM	R51274
Toluene	ND	0.064	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Methyl tert-butyl ether (MTBE)	110	0.24	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2-Dichloroethane (EDC)	29	0.40	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Naphthalene	ND	0.11	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Acetone	ND	0.82	10		µg/L	1	5/14/2018 4:32:00 PM	R51274
Bromobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Bromoform	ND	0.21	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Bromomethane	ND	0.26	3.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
2-Butanone	ND	1.1	10		µg/L	1	5/14/2018 4:32:00 PM	R51274
Carbon disulfide	ND	0.40	10		µg/L	1	5/14/2018 4:32:00 PM	R51274
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Chloroethane	ND	0.23	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Chloroform	0.71	0.40	1.0	J	µg/L	1	5/14/2018 4:32:00 PM	R51274
Chloromethane	ND	0.29	3.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
cis-1,2-DCE	2.1	0.20	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Dibromomethane	ND	0.091	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1-Dichloroethane	49	0.40	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1-Dichloroethene	93	0.081	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
2-Hexanone	ND	0.66	10		µg/L	1	5/14/2018 4:32:00 PM	R51274
Isopropylbenzene	1.6	0.051	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2018 4:32:00 PM	R51274
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
n-Butylbenzene	0.46	0.13	3.0	J	µg/L	1	5/14/2018 4:32:00 PM	R51274
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
sec-Butylbenzene	0.70	0.11	1.0	J	µg/L	1	5/14/2018 4:32:00 PM	R51274
Styrene	ND	0.16	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1,1-Trichloroethane	5.8	0.073	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,1,2-Trichloroethane	3.0	0.14	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Trichloroethene (TCE)	6.0	0.11	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2018 4:32:00 PM	R51274
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/14/2018 4:32:00 PM	R51274
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/14/2018 4:32:00 PM	R51274
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/14/2018 4:32:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 10:20:00 AM
Lab ID: 1805416-004
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	114	0	70-130		%Rec	1	5/14/2018 4:32:00 PM	R51274
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/14/2018 4:32:00 PM	R51274
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.32	0.0097	0.050		mg/L	1	5/9/2018 7:44:42 PM	A51162
Surr: BFB	107	0	70-130		%Rec	1	5/9/2018 7:44:42 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:00:00 PM
Lab ID: 1805416-005
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	10	0.63	1.0		mg/L	1	5/10/2018 11:48:57 PM	38013
Motor Oil Range Organics (MRO)	8.7	5.0	5.0		mg/L	1	5/10/2018 11:48:57 PM	38013
Surr: DNOP	131	0	76.7-135		%Rec	1	5/10/2018 11:48:57 PM	38013
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	770	2.0	2.0	H	mg/L	1	5/14/2018 11:12:00 AM	38003
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2.6	0.62	10	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
Toluene	1.8	0.64	10	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
Ethylbenzene	ND	0.93	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Methyl tert-butyl ether (MTBE)	ND	2.4	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2,4-Trimethylbenzene	3.1	1.1	10	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,3,5-Trimethylbenzene	ND	0.87	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2-Dichloroethane (EDC)	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2-Dibromoethane (EDB)	ND	1.3	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Naphthalene	ND	1.1	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1-Methylnaphthalene	5.3	1.6	40	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
2-Methylnaphthalene	5.7	1.5	40	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
Acetone	1400	8.2	100	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Bromobenzene	ND	1.4	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Bromodichloromethane	ND	1.8	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Bromoform	ND	2.1	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Bromomethane	ND	2.6	30	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
2-Butanone	ND	11	100	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Carbon disulfide	ND	4.0	100	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Carbon Tetrachloride	ND	1.1	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Chlorobenzene	ND	1.1	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Chloroethane	ND	2.3	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Chloroform	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Chloromethane	ND	2.9	30	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
2-Chlorotoluene	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
4-Chlorotoluene	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
cis-1,2-DCE	ND	2.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
cis-1,3-Dichloropropene	ND	0.82	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2-Dibromo-3-chloropropane	ND	14	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Dibromochloromethane	ND	0.72	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Dibromomethane	ND	0.91	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2-Dichlorobenzene	ND	0.90	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,3-Dichlorobenzene	ND	1.5	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:00:00 PM
Lab ID: 1805416-005
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,4-Dichlorobenzene	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Dichlorodifluoromethane	ND	10	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1-Dichloroethane	ND	4.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1-Dichloroethene	ND	0.81	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2-Dichloropropane	ND	1.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,3-Dichloropropane	ND	1.7	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
2,2-Dichloropropane	ND	1.6	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1-Dichloropropene	ND	0.93	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Hexachlorobutadiene	ND	8.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
2-Hexanone	ND	6.6	100	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Isopropylbenzene	ND	0.51	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
4-Isopropyltoluene	ND	0.96	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
4-Methyl-2-pentanone	ND	7.1	100	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Methylene Chloride	ND	1.1	30	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
n-Butylbenzene	ND	1.3	30	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
n-Propylbenzene	ND	0.74	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
sec-Butylbenzene	ND	1.1	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Styrene	ND	1.6	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
tert-Butylbenzene	ND	1.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1,1,2-Tetrachloroethane	ND	1.0	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1,2,2-Tetrachloroethane	ND	1.4	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Tetrachloroethene (PCE)	ND	1.3	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
trans-1,3-Dichloropropene	ND	2.2	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2,3-Trichlorobenzene	ND	1.2	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2,4-Trichlorobenzene	ND	1.4	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1,1-Trichloroethane	ND	0.73	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,1,2-Trichloroethane	ND	1.4	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Trichloroethene (TCE)	ND	1.1	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Trichlorofluoromethane	ND	1.8	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
1,2,3-Trichloropropane	ND	3.9	20	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Vinyl chloride	ND	1.8	10	D	µg/L	10	5/12/2018 2:27:00 AM	B51242
Xylenes, Total	5.8	3.2	15	JD	µg/L	10	5/12/2018 2:27:00 AM	B51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130	D	%Rec	10	5/12/2018 2:27:00 AM	B51242
Surr: 4-Bromofluorobenzene	110	0	70-130	D	%Rec	10	5/12/2018 2:27:00 AM	B51242
Surr: Dibromofluoromethane	108	0	70-130	D	%Rec	10	5/12/2018 2:27:00 AM	B51242
Surr: Toluene-d8	111	0	70-130	D	%Rec	10	5/12/2018 2:27:00 AM	B51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.51	0.048	0.25		mg/L	5	5/10/2018 11:26:40 AM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:00:00 PM
Lab ID: 1805416-005 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Surr: BFB	103	0	70-130		%Rec	5	5/10/2018 11:26:40 AM	A51162
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **sat**	
Total Dissolved Solids	3630	100	100	*D	mg/L	1	5/11/2018 12:48:00 PM	38053

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/11/2018 12:11:17 AM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 12:11:17 AM	38013
Surr: DNOP	116	0	76.7-135		%Rec	1	5/11/2018 12:11:17 AM	38013
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/8/2018 11:55:28 AM	R51131
Chloride	4800	0.59	10	E	mg/L	20	5/8/2018 12:07:53 PM	R51131
Nitrogen, Nitrite (As N)	2.4	0.96	2.0		mg/L	20	5/8/2018 12:07:53 PM	R51131
Bromide	1.4	0.13	0.50		mg/L	5	5/8/2018 11:55:28 AM	R51131
Nitrogen, Nitrate (As N)	0.10	0.033	0.50	J	mg/L	5	5/8/2018 11:55:28 AM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/8/2018 11:55:28 AM	R51131
Sulfate	560	4.1	10		mg/L	20	5/8/2018 12:07:53 PM	R51131
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.059	0.00099	0.0020		mg/L	1	5/10/2018 3:25:03 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:25:03 PM	A51175
Calcium	260	0.39	5.0		mg/L	5	5/23/2018 3:37:54 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:25:03 PM	A51175
Copper	0.0055	0.0032	0.0060	J	mg/L	1	5/10/2018 3:25:03 PM	A51175
Iron	0.030	0.016	0.020		mg/L	1	5/10/2018 3:25:03 PM	A51175
Magnesium	65	0.25	1.0		mg/L	1	5/10/2018 3:25:03 PM	A51175
Manganese	0.036	0.00039	0.0020		mg/L	1	5/10/2018 3:25:03 PM	A51175
Potassium	5.0	0.56	5.0	J	mg/L	5	5/23/2018 3:37:54 PM	B51452
Silver	0.030	0.0092	0.025		mg/L	5	5/23/2018 3:37:54 PM	B51452
Sodium	2300	8.2	50		mg/L	50	5/23/2018 6:41:03 PM	B51452
Zinc	ND	0.0021	0.010		mg/L	1	5/10/2018 3:25:03 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.18	0.0010	0.0020		mg/L	1	5/22/2018 7:07:44 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 7:07:44 PM	38206
Chromium	0.0026	0.0018	0.0060	J	mg/L	1	5/22/2018 7:07:44 PM	38206
Copper	0.0048	0.0041	0.0060	J	mg/L	1	5/22/2018 7:07:44 PM	38206
Iron	5.1	0.10	0.20	*	mg/L	10	5/23/2018 6:30:47 PM	38206
Manganese	0.23	0.0011	0.0020	*	mg/L	1	5/22/2018 7:07:44 PM	38206
Silver	0.0044	0.0012	0.0050	J	mg/L	1	5/22/2018 7:07:44 PM	38206
Zinc	0.017	0.0033	0.010		mg/L	1	5/22/2018 7:07:44 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0029	0.0021	0.0050	J	mg/L	5	5/21/2018 2:49:50 PM	A51420
Lead	ND	0.00087	0.0025		mg/L	5	5/21/2018 2:49:50 PM	A51420
Selenium	ND	0.0038	0.0050		mg/L	5	5/21/2018 2:49:50 PM	A51420

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.048	0.00048	0.0025	*	mg/L	5	5/21/2018 2:49:50 PM	A51420
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0055	0.0021	0.0050		mg/L	5	5/22/2018 2:09:16 PM	38206
Lead	0.0059	0.0011	0.0025		mg/L	5	5/22/2018 2:09:16 PM	38206
Selenium	ND	0.0049	0.0050		mg/L	5	5/22/2018 2:09:16 PM	38206
Uranium	0.054	0.00034	0.0025	*	mg/L	5	5/22/2018 2:09:16 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000054	0.000037	0.00020	J	mg/L	1	5/22/2018 10:03:43 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/18/2018 1:25:01 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 1:25:01 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 1:25:01 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 1:25:01 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 1:25:01 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 1:25:01 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 1:25:01 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 1:25:01 PM	38063
Surr: 2-Fluorophenol	51.1	0	15-114		%Rec	1	5/18/2018 1:25:01 PM	38063
Surr: Phenol-d5	37.0	0	15-97.9		%Rec	1	5/18/2018 1:25:01 PM	38063
Surr: 2,4,6-Tribromophenol	90.9	0	15-161		%Rec	1	5/18/2018 1:25:01 PM	38063
Surr: Nitrobenzene-d5	76.6	0	29.3-120		%Rec	1	5/18/2018 1:25:01 PM	38063
Surr: 2-Fluorobiphenyl	70.3	0	17.5-116		%Rec	1	5/18/2018 1:25:01 PM	38063
Surr: 4-Terphenyl-d14	80.0	0	21-92.2		%Rec	1	5/18/2018 1:25:01 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Toluene	ND	0.064	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Naphthalene	ND	0.11	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Acetone	ND	0.82	10		µg/L	1	5/12/2018 2:51:00 AM	B51242
Bromobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Bromoform	ND	0.21	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Bromomethane	ND	0.26	3.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
2-Butanone	ND	1.1	10		µg/L	1	5/12/2018 2:51:00 AM	B51242
Carbon disulfide	ND	0.40	10		µg/L	1	5/12/2018 2:51:00 AM	B51242
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Chloroethane	ND	0.23	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Chloroform	ND	0.40	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Chloromethane	ND	0.29	3.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1-Dichloroethane	0.77	0.40	1.0	J	µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
2-Hexanone	ND	0.66	10		µg/L	1	5/12/2018 2:51:00 AM	B51242
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/12/2018 2:51:00 AM	B51242
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Styrene	ND	0.16	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/12/2018 2:51:00 AM	B51242
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/12/2018 2:51:00 AM	B51242
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/12/2018 2:51:00 AM	B51242
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	5/12/2018 2:51:00 AM	B51242
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/12/2018 2:51:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 12:45:00 PM
Lab ID: 1805416-006 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/12/2018 2:51:00 AM	B51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/9/2018 8:07:44 PM	A51162
Surr: BFB	108	0	70-130		%Rec	1	5/9/2018 8:07:44 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	17	0.63	1.0		mg/L	1	5/11/2018 12:33:31 AM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 12:33:31 AM	38013
Surr: DNOP	104	0	76.7-135		%Rec	1	5/11/2018 12:33:31 AM	38013
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.86	0.15	0.50		mg/L	5	5/8/2018 12:20:17 PM	R51131
Chloride	960	2.9	50		mg/L	100	5/21/2018 3:03:19 PM	R51417
Nitrogen, Nitrite (As N)	0.64	0.24	0.50		mg/L	5	5/8/2018 12:20:17 PM	R51131
Bromide	1.3	0.13	0.50		mg/L	5	5/8/2018 12:20:17 PM	R51131
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/8/2018 12:20:17 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/8/2018 12:20:17 PM	R51131
Sulfate	ND	1.0	2.5		mg/L	5	5/8/2018 12:20:17 PM	R51131
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **MED**	
Barium	5.6	0.0099	0.020	*	mg/L	10	5/23/2018 3:42:04 PM	B51452
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:27:20 PM	A51175
Calcium	88	0.078	1.0		mg/L	1	5/10/2018 3:27:20 PM	A51175
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:27:20 PM	A51175
Copper	0.0049	0.0032	0.0060	J	mg/L	1	5/10/2018 3:27:20 PM	A51175
Iron	4.9	0.082	0.10	*	mg/L	5	5/10/2018 9:38:16 PM	C51175
Magnesium	32	0.25	1.0		mg/L	1	5/10/2018 3:27:20 PM	A51175
Manganese	0.96	0.00039	0.0020	*	mg/L	1	5/10/2018 3:27:20 PM	A51175
Potassium	3.4	0.11	1.0		mg/L	1	5/23/2018 1:40:15 PM	B51452
Silver	0.0044	0.0018	0.0050	J	mg/L	1	5/23/2018 1:40:15 PM	B51452
Sodium	780	1.6	10		mg/L	10	5/23/2018 3:42:04 PM	B51452
Zinc	0.0043	0.0021	0.010	J	mg/L	1	5/10/2018 3:27:20 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	6.6	0.010	0.020	*	mg/L	10	5/22/2018 7:13:55 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 7:11:54 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	5/22/2018 7:11:54 PM	38206
Copper	0.0060	0.0041	0.0060		mg/L	1	5/22/2018 7:11:54 PM	38206
Iron	8.1	0.10	0.20	*	mg/L	10	5/22/2018 7:13:55 PM	38206
Manganese	1.4	0.011	0.020	*	mg/L	10	5/22/2018 7:13:55 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	5/22/2018 7:11:54 PM	38206
Zinc	0.012	0.0033	0.010		mg/L	1	5/22/2018 7:11:54 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	5/17/2018 6:15:06 PM	B51361
Lead	0.00027	0.00017	0.00050	J	mg/L	1	5/17/2018 6:15:06 PM	B51361
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 6:15:06 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.000096	0.00050		mg/L	1	5/17/2018 6:15:06 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0022	0.0021	0.0050	J	mg/L	5	5/22/2018 2:11:34 PM	38206
Lead	0.0040	0.0011	0.0025		mg/L	5	5/22/2018 2:11:34 PM	38206
Selenium	ND	0.0049	0.0050		mg/L	5	5/22/2018 2:11:34 PM	38206
Uranium	ND	0.00034	0.0025		mg/L	5	5/22/2018 2:11:34 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000052	0.000037	0.00020	J	mg/L	1	5/22/2018 10:05:55 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/18/2018 1:53:09 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Carbazole	14	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Dibenzofuran	8.3	6.9	10	J	µg/L	1	5/18/2018 1:53:09 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Fluorene	21	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 1:53:09 PM	38063
1-Methylnaphthalene	160	7.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Methylnaphthalene	61	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 1:53:09 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 1:53:09 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Naphthalene	58	5.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 1:53:09 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 1:53:09 PM	38063
Phenanthrene	24	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 1:53:09 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 1:53:09 PM	38063
Surr: 2-Fluorophenol	45.5	0	15-114		%Rec	1	5/18/2018 1:53:09 PM	38063
Surr: Phenol-d5	35.1	0	15-97.9		%Rec	1	5/18/2018 1:53:09 PM	38063
Surr: 2,4,6-Tribromophenol	94.3	0	15-161		%Rec	1	5/18/2018 1:53:09 PM	38063
Surr: Nitrobenzene-d5	68.0	0	29.3-120		%Rec	1	5/18/2018 1:53:09 PM	38063
Surr: 2-Fluorobiphenyl	84.5	0	17.5-116		%Rec	1	5/18/2018 1:53:09 PM	38063
Surr: 4-Terphenyl-d14	85.1	0	21-92.2		%Rec	1	5/18/2018 1:53:09 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	12	0.31	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Toluene	ND	0.32	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Ethylbenzene	56	0.47	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Methyl tert-butyl ether (MTBE)	ND	1.2	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2,4-Trimethylbenzene	8.3	0.56	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Naphthalene	98	0.57	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
1-Methylnaphthalene	190	0.80	20		µg/L	5	5/12/2018 3:15:00 AM	B51242
2-Methylnaphthalene	77	0.76	20		µg/L	5	5/12/2018 3:15:00 AM	B51242
Acetone	ND	4.1	50		µg/L	5	5/12/2018 3:15:00 AM	B51242
Bromobenzene	ND	0.70	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Bromoform	ND	1.1	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Bromomethane	ND	1.3	15		µg/L	5	5/12/2018 3:15:00 AM	B51242
2-Butanone	ND	5.7	50		µg/L	5	5/12/2018 3:15:00 AM	B51242
Carbon disulfide	ND	2.0	50		µg/L	5	5/12/2018 3:15:00 AM	B51242
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Chloroethane	ND	1.2	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
Chloroform	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Chloromethane	ND	1.5	15		µg/L	5	5/12/2018 3:15:00 AM	B51242
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.45	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2-Dichlorobenzene	0.62	0.45	5.0	J	µg/L	5	5/12/2018 3:15:00 AM	B51242
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
2-Hexanone	ND	3.3	50		µg/L	5	5/12/2018 3:15:00 AM	B51242
Isopropylbenzene	25	0.26	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
4-Isopropyltoluene	2.5	0.48	5.0	J	µg/L	5	5/12/2018 3:15:00 AM	B51242
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/12/2018 3:15:00 AM	B51242
Methylene Chloride	ND	0.54	15		µg/L	5	5/12/2018 3:15:00 AM	B51242
n-Butylbenzene	9.0	0.65	15	J	µg/L	5	5/12/2018 3:15:00 AM	B51242
n-Propylbenzene	35	0.37	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
sec-Butylbenzene	18	0.55	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Styrene	ND	0.78	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
tert-Butylbenzene	0.63	0.52	5.0	J	µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/12/2018 3:15:00 AM	B51242
Vinyl chloride	ND	0.89	5.0		µg/L	5	5/12/2018 3:15:00 AM	B51242
Xylenes, Total	ND	1.6	7.5		µg/L	5	5/12/2018 3:15:00 AM	B51242
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	5/12/2018 3:15:00 AM	B51242
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	5	5/12/2018 3:15:00 AM	B51242
Surr: Dibromofluoromethane	110	0	70-130		%Rec	5	5/12/2018 3:15:00 AM	B51242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018 2:20:00 PM
Lab ID: 1805416-007 **Matrix:** AQUEOUS **Received Date:** 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	5	5/12/2018 3:15:00 AM	B51242
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.70	0.019	0.10		mg/L	2	5/10/2018 12:21:21 AM	A51162
Surr: BFB	101	0	70-130		%Rec	2	5/10/2018 12:21:21 AM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/16/2018 7:49:11 PM	38125
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.1	0.63	1.0		mg/L	1	5/11/2018 12:55:51 AM	38013
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/11/2018 12:55:51 AM	38013
Surr: DNOP	103	0	76.7-135		%Rec	1	5/11/2018 12:55:51 AM	38013
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/8/2018 12:45:07 PM	R51131
Chloride	490	1.5	25		mg/L	50	5/21/2018 3:16:11 PM	R51417
Nitrogen, Nitrite (As N)	0.38	0.24	0.50	J	mg/L	5	5/8/2018 12:45:07 PM	R51131
Bromide	1.3	0.13	0.50		mg/L	5	5/8/2018 12:45:07 PM	R51131
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/8/2018 12:45:07 PM	R51131
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/8/2018 12:45:07 PM	R51131
Sulfate	26	1.0	2.5		mg/L	5	5/8/2018 12:45:07 PM	R51131
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.26	0.00099	0.0020		mg/L	1	5/10/2018 3:29:19 PM	A51175
Cadmium	ND	0.0010	0.0020		mg/L	1	5/10/2018 3:29:19 PM	A51175
Calcium	100	0.39	5.0		mg/L	5	5/10/2018 9:44:07 PM	C51175
Chromium	ND	0.0013	0.0060		mg/L	1	5/10/2018 3:29:19 PM	A51175
Copper	0.0074	0.0032	0.0060		mg/L	1	5/10/2018 3:29:19 PM	A51175
Iron	0.76	0.016	0.020	*	mg/L	1	5/10/2018 3:29:19 PM	A51175
Magnesium	22	0.25	1.0		mg/L	1	5/10/2018 3:29:19 PM	A51175
Manganese	2.4	0.0020	0.010	*	mg/L	5	5/23/2018 3:44:17 PM	B51452
Potassium	0.83	0.11	1.0	J	mg/L	1	5/23/2018 1:42:10 PM	B51452
Silver	0.0019	0.0018	0.0050	J	mg/L	1	5/23/2018 1:42:10 PM	B51452
Sodium	560	1.6	10		mg/L	10	5/23/2018 3:46:32 PM	B51452
Zinc	0.0083	0.0021	0.010	J	mg/L	1	5/10/2018 3:29:19 PM	A51175
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.37	0.0010	0.0020		mg/L	1	5/22/2018 7:16:05 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 7:16:05 PM	38206
Chromium	0.0025	0.0018	0.0060	J	mg/L	1	5/22/2018 7:16:05 PM	38206
Copper	0.0065	0.0041	0.0060		mg/L	1	5/22/2018 7:16:05 PM	38206
Iron	3.1	0.051	0.10	*	mg/L	5	5/22/2018 7:18:04 PM	38206
Manganese	2.9	0.0055	0.010	*	mg/L	5	5/22/2018 7:18:04 PM	38206
Silver	0.0019	0.0012	0.0050	J	mg/L	1	5/22/2018 7:16:05 PM	38206
Zinc	0.0059	0.0033	0.010	J	mg/L	1	5/22/2018 7:16:05 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0043	0.00042	0.0010		mg/L	1	5/17/2018 6:17:28 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Lead	0.00017	0.00017	0.00050	J	mg/L	1	5/17/2018 6:17:28 PM	B51361
Selenium	ND	0.00076	0.0010		mg/L	1	5/17/2018 6:17:28 PM	B51361
Uranium	0.023	0.000096	0.00050		mg/L	1	5/17/2018 6:17:28 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0056	0.00041	0.0010		mg/L	1	5/22/2018 1:35:35 PM	38206
Lead	0.0027	0.00023	0.00050		mg/L	1	5/22/2018 1:35:35 PM	38206
Selenium	ND	0.00098	0.0010		mg/L	1	5/22/2018 1:35:35 PM	38206
Uranium	0.027	0.00034	0.0025		mg/L	5	5/22/2018 2:13:51 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000059	0.000037	0.00020	J	mg/L	1	5/22/2018 10:12:47 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Benzoic acid	16	6.3	20	J	µg/L	1	5/18/2018 2:21:02 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 2:21:02 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 2:21:02 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 2:21:02 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 2:21:02 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 2:21:02 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Phenol	10	6.0	10		µg/L	1	5/18/2018 2:21:02 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 2:21:02 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 2:21:02 PM	38063
Surr: 2-Fluorophenol	53.8	0	15-114		%Rec	1	5/18/2018 2:21:02 PM	38063
Surr: Phenol-d5	38.7	0	15-97.9		%Rec	1	5/18/2018 2:21:02 PM	38063
Surr: 2,4,6-Tribromophenol	94.3	0	15-161		%Rec	1	5/18/2018 2:21:02 PM	38063
Surr: Nitrobenzene-d5	71.5	0	29.3-120		%Rec	1	5/18/2018 2:21:02 PM	38063
Surr: 2-Fluorobiphenyl	75.4	0	17.5-116		%Rec	1	5/18/2018 2:21:02 PM	38063
Surr: 4-Terphenyl-d14	74.5	0	21-92.2		%Rec	1	5/18/2018 2:21:02 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2600	6.2	100		µg/L	100	5/14/2018 4:56:00 PM	R51274
Toluene	12	0.64	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Ethylbenzene	100	0.93	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Methyl tert-butyl ether (MTBE)	280	2.4	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2,4-Trimethylbenzene	3.4	1.1	10	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
1,3,5-Trimethylbenzene	ND	0.87	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Naphthalene	4.1	1.1	20	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
1-Methylnaphthalene	6.1	1.6	40	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
2-Methylnaphthalene	ND	1.5	40		µg/L	10	5/14/2018 5:20:00 PM	R51274
Acetone	ND	8.2	100		µg/L	10	5/14/2018 5:20:00 PM	R51274
Bromobenzene	ND	1.4	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Bromodichloromethane	ND	1.8	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Bromoform	ND	2.1	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Bromomethane	ND	2.6	30		µg/L	10	5/14/2018 5:20:00 PM	R51274
2-Butanone	ND	11	100		µg/L	10	5/14/2018 5:20:00 PM	R51274
Carbon disulfide	ND	4.0	100		µg/L	10	5/14/2018 5:20:00 PM	R51274
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Chlorobenzene	ND	1.1	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Chloroethane	ND	2.3	20		µg/L	10	5/14/2018 5:20:00 PM	R51274
Chloroform	ND	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Chloromethane	ND	2.9	30		µg/L	10	5/14/2018 5:20:00 PM	R51274
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
cis-1,2-DCE	56	2.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/14/2018 5:20:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/14/2018 5:20:00 PM	R51274
Dibromochloromethane	ND	0.72	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Dibromomethane	ND	0.91	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1-Dichloroethane	250	4.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1-Dichloroethene	120	0.81	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
2-Hexanone	ND	6.6	100		µg/L	10	5/14/2018 5:20:00 PM	R51274
Isopropylbenzene	56	0.51	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
4-Isopropyltoluene	1.3	0.96	10	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/14/2018 5:20:00 PM	R51274
Methylene Chloride	ND	1.1	30		µg/L	10	5/14/2018 5:20:00 PM	R51274
n-Butylbenzene	18	1.3	30	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
n-Propylbenzene	62	0.74	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
sec-Butylbenzene	9.2	1.1	10	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
Styrene	ND	1.6	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/14/2018 5:20:00 PM	R51274
Tetrachloroethene (PCE)	2.7	1.3	10	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1,1-Trichloroethane	14	0.73	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Trichloroethene (TCE)	27	1.1	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/14/2018 5:20:00 PM	R51274
Vinyl chloride	ND	1.8	10		µg/L	10	5/14/2018 5:20:00 PM	R51274
Xylenes, Total	7.4	3.2	15	J	µg/L	10	5/14/2018 5:20:00 PM	R51274
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	10	5/14/2018 5:20:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/6/2018
Lab ID: 1805416-008
Matrix: AQUEOUS
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	10	5/14/2018 5:20:00 PM	R51274
Surr: Dibromofluoromethane	116	0	70-130		%Rec	10	5/14/2018 5:20:00 PM	R51274
Surr: Toluene-d8	110	0	70-130		%Rec	10	5/14/2018 5:20:00 PM	R51274
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	13	0.097	0.50		mg/L	10	5/10/2018 12:12:48 PM	A51162
Surr: BFB	105	0	70-130		%Rec	10	5/10/2018 12:12:48 PM	A51162

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805416-009
Matrix: TRIP BLANK
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.33	0.062	1.0	J	µg/L	1	5/14/2018 5:44:00 PM	R51274
Toluene	ND	0.064	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Naphthalene	ND	0.11	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Acetone	ND	0.82	10		µg/L	1	5/14/2018 5:44:00 PM	R51274
Bromobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Bromoform	ND	0.21	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Bromomethane	ND	0.26	3.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
2-Butanone	ND	1.1	10		µg/L	1	5/14/2018 5:44:00 PM	R51274
Carbon disulfide	ND	0.40	10		µg/L	1	5/14/2018 5:44:00 PM	R51274
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Chloroethane	ND	0.23	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Chloroform	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Chloromethane	ND	0.29	3.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Dibromomethane	ND	0.091	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805416-009
Matrix: TRIP BLANK
Received Date: 5/8/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
2-Hexanone	ND	0.66	10		µg/L	1	5/14/2018 5:44:00 PM	R51274
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/14/2018 5:44:00 PM	R51274
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Styrene	ND	0.16	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/14/2018 5:44:00 PM	R51274
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/14/2018 5:44:00 PM	R51274
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	5/14/2018 5:44:00 PM	R51274
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/14/2018 5:44:00 PM	R51274
Surr: Dibromofluoromethane	114	0	70-130		%Rec	1	5/14/2018 5:44:00 PM	R51274
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/14/2018 5:44:00 PM	R51274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1300		50.0	5	05/15/2018 13:26	WG1111311

Method Blank (MB)

(MB) R3309890-1 05/15/18 13:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L992428-01 Original Sample (OS) • Duplicate (DUP)

(OS) L992428-01 05/15/18 13:25 • (DUP) R3309890-4 05/15/18 13:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	258	257	1	0.555		20

L993279-01 Original Sample (OS) • Duplicate (DUP)

(OS) L993279-01 05/15/18 13:28 • (DUP) R3309890-5 05/15/18 13:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	223	224	1	0.0939		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3309890-2 05/15/18 13:23 • (LCSD) R3309890-3 05/15/18 13:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	224	224	92.6	92.5	90.0-110			0.116	20

L993331-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L993331-01 05/15/18 13:28 • (MS) R3309890-6 05/15/18 13:28 • (MSD) R3309890-7 05/15/18 13:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	28.1	412	411	96.1	95.7	1	80.0-120			0.411	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0011	0.0020	0.002000	0	55.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	0.44	1.0	0.5000	0	88.0	50	150			J
Chromium	0.0042	0.0060	0.006000	0	69.7	50	150			J
Copper	0.0050	0.0060	0.006000	0	83.0	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.40	1.0	0.5000	0	80.9	50	150			J
Manganese	0.0019	0.0020	0.002000	0	93.5	50	150			J
Sodium	0.50	1.0	0.5000	0	100	50	150			J
Zinc	0.0048	0.010	0.005000	0	95.6	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	89.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.2	85	115			
Calcium	48	1.0	50.00	0	95.0	85	115			
Chromium	0.45	0.0060	0.5000	0	91.0	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.48	0.020	0.5000	0	96.2	85	115			
Magnesium	48	1.0	50.00	0	95.2	85	115			
Manganese	0.46	0.0020	0.5000	0	92.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.49	1.0	0.5000	0	97.7	50	150			J
Iron	0.020	0.020	0.02000	0	102	50	150			

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51175**	RunNo: **51175**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.9	85	115			
Iron	0.49	0.020	0.5000	0	98.2	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	103	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Potassium	51	1.0	50.00	0	103	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Sodium	53	1.0	50.00	0	107	85	115			

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51452**	RunNo: **51452**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Calcium	0.49	1.0	0.5000	0	98.7	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0046	0.0050	0.005000	0	91.2	50	150			J
Sodium	0.43	1.0	0.5000	0	86.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-38206**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38206**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Chromium	0.0058	0.0060	0.006000	0	97.5	50	150			J
Copper	0.0047	0.0060	0.006000	0	78.7	50	150			J
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J
Zinc	0.0060	0.010	0.005000	0	119	50	150			J

Sample ID **LCS-38206**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.47	0.0060	0.5000	0	94.9	85	115			
Iron	0.48	0.020	0.5000	0	96.2	85	115			
Manganese	0.46	0.0020	0.5000	0	92.8	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	94.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805416-001FMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB07**	Batch ID:	**B51361**		RunNo:	**51361**				
Prep Date:		Analysis Date:	**5/17/2018**		SeqNo:	**1670654**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.4	70	130			
Lead	0.012	0.00050	0.01250	0	94.1	70	130			
Selenium	0.023	0.0010	0.02500	0	91.1	70	130			
Uranium	0.012	0.00050	0.01250	0	96.0	70	130			

Sample ID	**1805416-001FMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB07**	Batch ID:	**B51361**		RunNo:	**51361**				
Prep Date:		Analysis Date:	**5/17/2018**		SeqNo:	**1670655**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	88.8	70	130	2.89	20	
Lead	0.011	0.00050	0.01250	0	91.1	70	130	3.17	20	
Selenium	0.022	0.0010	0.02500	0	88.3	70	130	3.12	20	
Uranium	0.011	0.00050	0.01250	0	91.1	70	130	5.22	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B51361**		RunNo:	**51361**				
Prep Date:		Analysis Date:	**5/17/2018**		SeqNo:	**1670669**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B51361**		RunNo:	**51361**				
Prep Date:		Analysis Date:	**5/17/2018**		SeqNo:	**1670670**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00089	0.0010	0.001000	0	89.4	50	150			J
Lead	0.00046	0.00050	0.0005000	0	91.6	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B51361**		RunNo:	**51361**				
Prep Date:		Analysis Date:	**5/17/2018**		SeqNo:	**1670671**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51361**	RunNo: **51361**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.7	85	115			
Lead	0.012	0.00050	0.01250	0	93.2	85	115			
Selenium	0.023	0.0010	0.02500	0	91.3	85	115			
Uranium	0.012	0.00050	0.01250	0	95.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673324** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.8	50	150			J
Selenium	0.00094	0.0010	0.001000	0	94.5	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.9	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.7	85	115			
Lead	0.011	0.00050	0.01250	0	92.0	85	115			
Selenium	0.023	0.0010	0.02500	0	91.2	85	115			
Uranium	0.012	0.00050	0.01250	0	92.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38206**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674398**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-38206**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674400**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID	**MSLLLCS-38206**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674402**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	113	50	150			
Lead	0.00059	0.00050	0.0005000	0	118	50	150			
Selenium	0.0011	0.0010	0.001000	0	113	50	150			
Uranium	0.00061	0.00050	0.0005000	0	122	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38233**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38233**	RunNo:	**51419**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673437**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000038	0.00020								J

Sample ID	**LCS-38233**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38233**	RunNo:	**51419**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673438**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51131**	RunNo: **51131**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661226** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.12	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.11	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51131**	RunNo: **51131**
Prep Date:	Analysis Date: **5/8/2018**	SeqNo: **1661227** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	94.3	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.2	90	110			
Bromide	2.5	0.10	2.500	0	98.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.3	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	93.9	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51272**	RunNo: **51272**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666679** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51272**	RunNo: **51272**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	109	90	110			
Chloride	4.6	0.50	5.000	0	92.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51272**	RunNo: **51272**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	95.0	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.2	0.50	10.00	0	91.6	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51417**	RunNo: **51417**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673244** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51417**	RunNo: **51417**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38125**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670441**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-38125**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**38125**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670444**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-38013**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38013**	RunNo: **51178**
Prep Date: **5/9/2018**	Analysis Date: **5/10/2018**	SeqNo: **1664203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		100	76.7	135			

Sample ID **LCS-38013**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38013**	RunNo: **51178**
Prep Date: **5/9/2018**	Analysis Date: **5/10/2018**	SeqNo: **1664204** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	70	130			
Surr: DNOP	0.51		0.5000		102	76.7	135			

Sample ID **1805416-001CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB07**	Batch ID: **38013**	RunNo: **51178**
Prep Date: **5/9/2018**	Analysis Date: **5/10/2018**	SeqNo: **1664206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	82.8	143			
Surr: DNOP	0.50		0.5000		99.8	76.7	135			

Sample ID **1805416-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **EB07**	Batch ID: **38013**	RunNo: **51178**
Prep Date: **5/9/2018**	Analysis Date: **5/10/2018**	SeqNo: **1664207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	91.6	82.8	143	9.29	20	
Surr: DNOP	0.47		0.5000		94.3	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665695** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.31	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.12	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665696** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665725** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	24	1.0	20.00	0	118	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		112	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665726** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.070	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.28	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665726** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.11	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B51242**	RunNo: **51242**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665726** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666778** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	24	1.0	20.00	0	119	70	130			
Chlorobenzene	24	1.0	20.00	0	120	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51274**	RunNo: **51274**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666781** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38063**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669313** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.0	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	85.2	40.5	108			
2-Chlorophenol	150	10	200.0	0	76.1	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	67.9	24.7	93.7			
2,4-Dinitrotoluene	79	10	100.0	0	78.7	35.6	91.4			
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.0	41.6	114			
4-Nitrophenol	140	10	200.0	0	70.0	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	79.7	25.3	98.5			
Phenol	130	10	200.0	0	63.6	20.9	75.1			
Pyrene	83	10	100.0	0	82.5	45.6	108			
1,2,4-Trichlorobenzene	77	10	100.0	0	76.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		67.1	15	114			
Surr: Phenol-d5	120		200.0		62.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		89.1	15	161			
Surr: Nitrobenzene-d5	76		100.0		75.7	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	17.5	116			
Surr: 4-Terphenyl-d14	76		100.0		76.4	21	92.2			

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	15	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**	
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		57.5	15	114			
Surr: Phenol-d5	95		200.0		47.7	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.0	15	161			
Surr: Nitrobenzene-d5	64		100.0		63.8	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.0	17.5	116			
Surr: 4-Terphenyl-d14	71		100.0		71.0	21	92.2			

Sample ID **lcs-38139**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672672** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.4	15	114			
Surr: Phenol-d5	120		200.0		61.5	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		96.8	15	161			
Surr: Nitrobenzene-d5	84		100.0		84.0	29.3	120			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		77.1	21	92.2			

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**
07-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.9	15	114			
Surr: Phenol-d5	110		200.0		52.9	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.1	15	161			
Surr: Nitrobenzene-d5	72		100.0		72.3	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		72.9	17.5	116			
Surr: 4-Terphenyl-d14	75		100.0		75.2	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38003**	SampType:	**MBLK**		TestCode:	**SM5210B: BOD**				
Client ID:	**PBW**	Batch ID:	**38003**		RunNo:	**51253**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/14/2018**		SeqNo:	**1665957**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**MB--38003**	SampType:	**MBLK**		TestCode:	**SM5210B: BOD**				
Client ID:	**PBW**	Batch ID:	**38003**		RunNo:	**51253**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/14/2018**		SeqNo:	**1665958**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-38003**	SampType:	**LCS**		TestCode:	**SM5210B: BOD**				
Client ID:	**LCSW**	Batch ID:	**38003**		RunNo:	**51253**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/14/2018**		SeqNo:	**1665959**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0	198.0	0	88.5	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A51162**	RunNo: **51162**
Prep Date:	Analysis Date: **5/9/2018**	SeqNo: **1662259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.1	70	130			
Surr: BFB	9.2		10.00		91.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A51162**	RunNo: **51162**
Prep Date:	Analysis Date: **5/9/2018**	SeqNo: **1662260** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		107	70	130			

Sample ID **1805416-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **FB07**	Batch ID: **A51162**	RunNo: **51185**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663909** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	70	130			
Surr: BFB	9.5		10.00		95.3	70	130			

Sample ID **1805416-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **FB07**	Batch ID: **A51162**	RunNo: **51185**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1663910** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.9	70	130	6.36	20	
Surr: BFB	9.7		10.00		96.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805416**

07-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38053**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**38053**	RunNo:	**51208**					
Prep Date:	**5/10/2018**	Analysis Date:	**5/11/2018**	SeqNo:	**1664365**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-38053**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**38053**	RunNo:	**51208**					
Prep Date:	**5/10/2018**	Analysis Date:	**5/11/2018**	SeqNo:	**1664366**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	995	20.0	1000	0	99.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805416 | RcptNo: 1

Received By: Isaiah Ortiz 5/8/2018 9:15:00 AM IO

Completed By: Ashley Gallegos 5/8/2018 10:28:36 AM AG

Reviewed By: JMO/ENM 5/9/18 @ 1106

Labeled by: JMO/ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

JB 05/09/18

# of preserved bottles checked for pH: ~~2~~ 22 (<2 or >12 unless noted)

Adjusted? No

Checked by: JB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			
2	0.9	Good	Yes			
3	1.8	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 5 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805416	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/5/18	0750	H_2O	EB07	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Courier	Date	Time
5/7/18	0700				5/8/18	0915
Date:	Time:	Relinquished by:	Received by:		Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Coolers #1. 1.8° #2. 0.9° #3. 1.8°

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/6/18	0830	H_2O	FB07	40ml VOA-5	HCl	1805416-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Courier	5/8/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler Temps. 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☒~~ Yes ☐ No

Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805416	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/6/18	0900	H_2O	MKTF-2.5	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Cooler		
			TOS	5/8/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler Temps 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ~~☐~~ Yes ☐ No
Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/6/18	1020	H_2O	MKTF-31	40ml VOA-5	HCl	1805416 -004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Courier		
				5/8/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler Temps 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Outfall Sampling (API)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ~~☐~~ Yes ☐ No
Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805416	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	BOD	TDS	COD		Air Bubbles (Y or N)
5/6/18	1200	H_2O	STP-1 to EP-2	40ml VOA-5	HCl	-005			X							X						
				250 ml Amber-1	Neat				X													
				1 Liter Plastic-1	Neat													X				
				500 ml Plastic-1	Neat														X			
				500 ml Plastic-1	H_2SO_4															X		

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700			5/8/18	905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
Cooler temps: 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805416	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/6/18	1245	H_2O	MKTF-40	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Courier		
			IOA	5/8/18	9:45
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler temps: 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐ Yes~~ ☐ No

Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805416	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/4/18	1420	H_2O	MKTF-39	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Courier		
			I Ortiz	5/8/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler temps 1.8, 0.9, 1.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/6/18	—	H_2O	DUP 07	40ml VOA-5	HCl	1805416-008			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/6/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCl	-009										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/7/18	0700		Courier	5/8/18	915
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Cooler temps 1.8, 0.9, 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 12, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling (OW) OrderNo.: 1805523

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 12 sample(s) on 5/9/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805523**
Date Reported: **6/12/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/15/2018 3:22:32 PM	38072
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2018 3:22:32 PM	38072
Surr: DNOP	109	0	76.7-135		%Rec	1	5/15/2018 3:22:32 PM	38072
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 4:29:32 AM	A51144
Chloride	1700	5.9	100		mg/L	200	5/22/2018 2:28:26 PM	R51493
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 4:29:32 AM	A51144
Bromide	4.2	0.13	0.50		mg/L	5	5/10/2018 4:29:32 AM	A51144
Nitrogen, Nitrate (As N)	19	0.033	0.50	*	mg/L	5	5/10/2018 4:29:32 AM	A51144
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 4:29:32 AM	A51144
Sulfate	730	4.1	10		mg/L	20	5/10/2018 4:41:56 AM	A51144
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.030	0.00099	0.0020		mg/L	1	5/22/2018 10:58:21 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 10:58:21 PM	B51451
Calcium	110	0.39	5.0		mg/L	5	5/23/2018 12:23:36 PM	B51452
Chromium	0.0091	0.0013	0.0060		mg/L	1	5/22/2018 10:58:21 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 10:58:21 PM	B51451
Iron	0.11	0.016	0.020		mg/L	1	5/23/2018 12:21:23 PM	B51452
Magnesium	18	0.25	1.0		mg/L	1	5/22/2018 10:58:21 PM	B51451
Manganese	0.0084	0.00039	0.0020		mg/L	1	5/22/2018 10:58:21 PM	B51451
Potassium	3.3	0.11	1.0		mg/L	1	5/22/2018 10:58:21 PM	B51451
Silver	0.0024	0.0018	0.0050	J	mg/L	1	5/22/2018 10:58:21 PM	B51451
Sodium	1500	3.3	20		mg/L	20	5/23/2018 12:25:39 PM	B51452
Zinc	0.0068	0.0021	0.010	J	mg/L	1	5/23/2018 12:21:23 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.36	0.0010	0.0020		mg/L	1	5/18/2018 1:52:01 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:34:26 PM	38107
Chromium	0.019	0.0018	0.0060		mg/L	1	5/18/2018 1:52:01 AM	38107
Copper	0.0090	0.0041	0.0060		mg/L	1	5/18/2018 1:52:01 AM	38107
Iron	8.4	0.10	0.20	*	mg/L	10	5/22/2018 4:44:56 PM	38107
Manganese	1.3	0.0055	0.010	*	mg/L	5	5/22/2018 4:42:55 PM	38107
Silver	0.0013	0.0012	0.0050	J	mg/L	1	5/18/2018 1:52:01 AM	38107
Zinc	0.021	0.0033	0.010		mg/L	1	5/22/2018 4:34:26 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	5/16/2018 5:39:11 PM	B51316
Lead	ND	0.00087	0.0025		mg/L	5	5/16/2018 5:39:11 PM	B51316
Selenium	0.023	0.0038	0.0050		mg/L	5	5/16/2018 5:39:11 PM	B51316

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.050	0.00048	0.0025	*	mg/L	5	5/16/2018 5:39:11 PM	B51316
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0055	0.0021	0.0050		mg/L	5	5/15/2018 10:48:51 AM	38107
Lead	0.0077	0.0011	0.0025		mg/L	5	5/15/2018 10:48:51 AM	38107
Selenium	0.022	0.0049	0.0050		mg/L	5	5/15/2018 10:48:51 AM	38107
Uranium	0.052	0.00034	0.0025	*	mg/L	5	5/15/2018 10:48:51 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000049	0.000037	0.00020	J	mg/L	1	5/22/2018 9:34:14 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/18/2018 2:48:47 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 2:48:47 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 2:48:47 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 2:48:47 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 2:48:47 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 2:48:47 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 2:48:47 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 2:48:47 PM	38063
Surr: 2-Fluorophenol	42.9	0	15-114		%Rec	1	5/18/2018 2:48:47 PM	38063
Surr: Phenol-d5	35.8	0	15-97.9		%Rec	1	5/18/2018 2:48:47 PM	38063
Surr: 2,4,6-Tribromophenol	75.2	0	15-161		%Rec	1	5/18/2018 2:48:47 PM	38063
Surr: Nitrobenzene-d5	72.4	0	29.3-120		%Rec	1	5/18/2018 2:48:47 PM	38063
Surr: 2-Fluorobiphenyl	71.4	0	17.5-116		%Rec	1	5/18/2018 2:48:47 PM	38063
Surr: 4-Terphenyl-d14	73.9	0	21-92.2		%Rec	1	5/18/2018 2:48:47 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Methyl tert-butyl ether (MTBE)	0.42	0.24	1.0	J	µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Acetone	ND	0.82	10		µg/L	1	5/16/2018 12:54:19 PM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 12:54:19 PM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 12:54:19 PM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 12:54:19 PM	A51325
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 12:54:19 PM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 12:54:19 PM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 12:54:19 PM	A51325
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	5/16/2018 12:54:19 PM	A51325
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/16/2018 12:54:19 PM	A51325
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/16/2018 12:54:19 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 7:40:00 AM
Lab ID: 1805523-001 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.9	0	70-130		%Rec	1	5/16/2018 12:54:19 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/11/2018 11:43:18 PM	B51228
Surr: BFB	110	0	70-130		%Rec	1	5/11/2018 11:43:18 PM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/15/2018 3:44:46 PM	38072
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2018 3:44:46 PM	38072
Surr: DNOP	128	0	76.7-135		%Rec	1	5/15/2018 3:44:46 PM	38072
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 5:19:11 AM	B51144
Chloride	1800	5.9	100		mg/L	200	5/22/2018 2:41:17 PM	R51493
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	5/10/2018 5:31:35 AM	B51144
Bromide	2.5	0.13	0.50		mg/L	5	5/10/2018 5:19:11 AM	B51144
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/10/2018 5:19:11 AM	B51144
Phosphorus, Orthophosphate (As P)	ND	4.6	25	H	mg/L	50	5/29/2018 4:44:09 PM	R51571
Sulfate	2400	41	100		mg/L	200	5/22/2018 2:41:17 PM	R51493
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.011	0.00099	0.0020		mg/L	1	5/22/2018 11:00:35 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:00:35 PM	B51451
Calcium	220	0.39	5.0		mg/L	5	5/23/2018 12:30:00 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:00:35 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 11:00:35 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 12:27:47 PM	B51452
Magnesium	62	0.25	1.0		mg/L	1	5/22/2018 11:00:35 PM	B51451
Manganese	0.026	0.00039	0.0020		mg/L	1	5/22/2018 11:00:35 PM	B51451
Potassium	0.78	0.11	1.0	J	mg/L	1	5/22/2018 11:00:35 PM	B51451
Silver	0.0042	0.0018	0.0050	J	mg/L	1	5/22/2018 11:00:35 PM	B51451
Sodium	2500	8.2	50		mg/L	50	5/23/2018 12:32:05 PM	B51452
Zinc	0.0046	0.0021	0.010	J	mg/L	1	5/23/2018 12:27:47 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.020	0.0010	0.0020		mg/L	1	5/18/2018 1:54:01 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:46:53 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:54:01 AM	38107
Copper	0.0059	0.0041	0.0060	J	mg/L	1	5/18/2018 1:54:01 AM	38107
Iron	0.36	0.010	0.020	*	mg/L	1	5/18/2018 1:54:01 AM	38107
Manganese	0.041	0.0011	0.0020		mg/L	1	5/18/2018 1:54:01 AM	38107
Silver	0.0030	0.0012	0.0050	J	mg/L	1	5/18/2018 1:54:01 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:46:53 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0061	0.0042	0.010	J	mg/L	10	5/17/2018 5:39:13 PM	B51361
Lead	ND	0.0017	0.0050		mg/L	10	5/17/2018 5:39:13 PM	B51361
Selenium	ND	0.0076	0.010		mg/L	10	5/17/2018 5:39:13 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.14	0.00096	0.0050	*	mg/L	10	5/17/2018 5:39:13 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0076	0.0041	0.010	J	mg/L	10	5/15/2018 11:52:37 AM	38107
Lead	ND	0.0023	0.0050		mg/L	10	5/15/2018 11:52:37 AM	38107
Selenium	ND	0.0098	0.010		mg/L	10	5/15/2018 11:52:37 AM	38107
Uranium	0.14	0.00068	0.0050	*	mg/L	10	5/15/2018 11:52:37 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000058	0.000037	0.00020	J	mg/L	1	5/22/2018 9:36:30 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzoic acid	ND	6.3	20		µg/L	1	5/18/2018 3:16:35 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 3:16:35 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 3:16:35 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 3:16:35 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 3:16:35 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 3:16:35 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 3:16:35 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 3:16:35 PM	38063
Surr: 2-Fluorophenol	5.60	0	15-114	S	%Rec	1	5/18/2018 3:16:35 PM	38063
Surr: Phenol-d5	18.1	0	15-97.9		%Rec	1	5/18/2018 3:16:35 PM	38063
Surr: 2,4,6-Tribromophenol	8.74	0	15-161	S	%Rec	1	5/18/2018 3:16:35 PM	38063
Surr: Nitrobenzene-d5	68.7	0	29.3-120		%Rec	1	5/18/2018 3:16:35 PM	38063
Surr: 2-Fluorobiphenyl	72.7	0	17.5-116		%Rec	1	5/18/2018 3:16:35 PM	38063
Surr: 4-Terphenyl-d14	75.6	0	21-92.2		%Rec	1	5/18/2018 3:16:35 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Methyl tert-butyl ether (MTBE)	9.2	0.24	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Acetone	1.5	0.82	10	J	µg/L	1	5/16/2018 1:23:34 PM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 1:23:34 PM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 1:23:34 PM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 1:23:34 PM	A51325
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 1:23:34 PM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 1:23:34 PM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 1:23:34 PM	A51325
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/16/2018 1:23:34 PM	A51325
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/16/2018 1:23:34 PM	A51325
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	5/16/2018 1:23:34 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:10:00 AM
Lab ID: 1805523-002 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	5/16/2018 1:23:34 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	2.8	0.0097	0.050		mg/L	1	5/12/2018 12:52:31 AM	B51228
Surr: BFB	106	0	70-130		%Rec	1	5/12/2018 12:52:31 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/15/2018 4:06:45 PM	38072
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2018 4:06:45 PM	38072
Surr: DNOP	125	0	76.7-135		%Rec	1	5/15/2018 4:06:45 PM	38072
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 7:48:03 AM	B51144
Chloride	590	1.5	25		mg/L	50	5/22/2018 2:54:09 PM	R51493
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 7:48:03 AM	B51144
Bromide	1.8	0.13	0.50		mg/L	5	5/10/2018 7:48:03 AM	B51144
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	5/10/2018 7:48:03 AM	B51144
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 7:48:03 AM	B51144
Sulfate	20	1.0	2.5		mg/L	5	5/10/2018 7:48:03 AM	B51144
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.34	0.00099	0.0020		mg/L	1	5/22/2018 11:02:49 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:02:49 PM	B51451
Calcium	94	0.078	1.0		mg/L	1	5/22/2018 11:02:49 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:02:49 PM	B51451
Copper	0.0083	0.0032	0.0060		mg/L	1	5/22/2018 11:02:49 PM	B51451
Iron	ND	0.016	0.020		mg/L	1	5/23/2018 12:34:15 PM	B51452
Magnesium	17	0.25	1.0		mg/L	1	5/22/2018 11:02:49 PM	B51451
Manganese	0.031	0.00039	0.0020		mg/L	1	5/22/2018 11:02:49 PM	B51451
Potassium	1.0	0.11	1.0		mg/L	1	5/22/2018 11:02:49 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 11:02:49 PM	B51451
Sodium	500	1.6	10		mg/L	10	5/24/2018 8:02:12 PM	A51516
Zinc	0.0075	0.0021	0.010	J	mg/L	1	5/23/2018 12:34:15 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.30	0.0010	0.0020		mg/L	1	5/18/2018 1:56:18 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:49:06 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:56:18 AM	38107
Copper	0.011	0.0041	0.0060		mg/L	1	5/18/2018 1:56:18 AM	38107
Iron	0.48	0.010	0.020	*	mg/L	1	5/18/2018 1:56:18 AM	38107
Manganese	0.049	0.0011	0.0020		mg/L	1	5/18/2018 1:56:18 AM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:56:18 AM	38107
Zinc	0.0060	0.0033	0.010	J	mg/L	1	5/22/2018 4:49:06 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0023	0.0021	0.0050	J	mg/L	5	5/17/2018 5:41:38 PM	B51361
Lead	ND	0.00087	0.0025		mg/L	5	5/17/2018 5:41:38 PM	B51361
Selenium	ND	0.0038	0.0050		mg/L	5	5/17/2018 5:41:38 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.017	0.00048	0.0025		mg/L	5	5/17/2018 5:41:38 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0036	0.00041	0.0010		mg/L	1	5/15/2018 10:58:14 AM	38107
Lead	0.00054	0.00023	0.00050		mg/L	1	5/15/2018 10:58:14 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 10:58:14 AM	38107
Uranium	0.018	0.000068	0.00050		mg/L	1	5/15/2018 10:58:14 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000040	0.000037	0.00020	J	mg/L	1	5/22/2018 9:38:46 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Benzoic acid	14	6.3	20	J	µg/L	1	5/18/2018 3:44:41 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 3:44:41 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 3:44:41 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 3:44:41 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 3:44:41 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 3:44:41 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 3:44:41 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 3:44:41 PM	38063
Surr: 2-Fluorophenol	45.6	0	15-114		%Rec	1	5/18/2018 3:44:41 PM	38063
Surr: Phenol-d5	36.1	0	15-97.9		%Rec	1	5/18/2018 3:44:41 PM	38063
Surr: 2,4,6-Tribromophenol	84.7	0	15-161		%Rec	1	5/18/2018 3:44:41 PM	38063
Surr: Nitrobenzene-d5	70.2	0	29.3-120		%Rec	1	5/18/2018 3:44:41 PM	38063
Surr: 2-Fluorobiphenyl	69.6	0	17.5-116		%Rec	1	5/18/2018 3:44:41 PM	38063
Surr: 4-Terphenyl-d14	81.6	0	21-92.2		%Rec	1	5/18/2018 3:44:41 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.27	0.062	1.0	J	µg/L	1	5/16/2018 1:52:47 PM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Methyl tert-butyl ether (MTBE)	91	0.24	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2-Dichloroethane (EDC)	1.9	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Acetone	4.3	0.82	10	J	µg/L	1	5/16/2018 1:52:47 PM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 1:52:47 PM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 1:52:47 PM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 1:52:47 PM	A51325
Isopropylbenzene	1.2	0.051	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 1:52:47 PM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 1:52:47 PM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 1:52:47 PM	A51325
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/16/2018 1:52:47 PM	A51325
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/16/2018 1:52:47 PM	A51325
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/16/2018 1:52:47 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 8:40:00 AM
Lab ID: 1805523-003 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	5/16/2018 1:52:47 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.10	0.0097	0.050		mg/L	1	5/12/2018 1:15:42 AM	B51228
Surr: BFB	103	0	70-130		%Rec	1	5/12/2018 1:15:42 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.9	0.63	1.0		mg/L	1	5/15/2018 4:28:55 PM	38072
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2018 4:28:55 PM	38072
Surr: DNOP	124	0	76.7-135		%Rec	1	5/15/2018 4:28:55 PM	38072
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 8:49:39 AM	R51212
Chloride	310	0.59	10		mg/L	20	5/10/2018 9:02:31 AM	R51212
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 8:49:39 AM	R51212
Bromide	1.1	0.13	0.50		mg/L	5	5/10/2018 8:49:39 AM	R51212
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/10/2018 8:49:39 AM	R51212
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 8:49:39 AM	R51212
Sulfate	1.9	1.0	2.5	J	mg/L	5	5/10/2018 8:49:39 AM	R51212
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.52	0.00099	0.0020		mg/L	1	5/22/2018 11:05:00 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:05:00 PM	B51451
Calcium	110	0.39	5.0		mg/L	5	5/23/2018 12:46:52 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:05:00 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 11:05:00 PM	B51451
Iron	3.7	0.082	0.10	*	mg/L	5	5/23/2018 12:46:52 PM	B51452
Magnesium	29	0.25	1.0		mg/L	1	5/22/2018 11:05:00 PM	B51451
Manganese	4.0	0.0020	0.010	*	mg/L	5	5/23/2018 12:46:52 PM	B51452
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 11:05:00 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 11:05:00 PM	B51451
Sodium	390	0.82	5.0		mg/L	5	5/23/2018 12:46:52 PM	B51452
Zinc	0.0065	0.0021	0.010	J	mg/L	1	5/23/2018 12:44:52 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.49	0.0010	0.0020		mg/L	1	5/18/2018 1:58:29 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:51:16 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 1:58:29 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 1:58:29 AM	38107
Iron	4.4	0.051	0.10	*	mg/L	5	5/22/2018 4:53:19 PM	38107
Manganese	4.1	0.0055	0.010	*	mg/L	5	5/22/2018 4:53:19 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 1:58:29 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:51:16 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0043	0.0021	0.0050	J	mg/L	5	5/17/2018 5:44:01 PM	B51361
Lead	ND	0.00087	0.0025		mg/L	5	5/17/2018 5:44:01 PM	B51361
Selenium	ND	0.0038	0.0050		mg/L	5	5/17/2018 5:44:01 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0036	0.00048	0.0025		mg/L	5	5/17/2018 5:44:01 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0060	0.00041	0.0010		mg/L	1	5/15/2018 11:00:38 AM	38107
Lead	0.00069	0.00023	0.00050		mg/L	1	5/15/2018 11:00:38 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 11:00:38 AM	38107
Uranium	0.0046	0.000068	0.00050		mg/L	1	5/15/2018 11:00:38 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	5/22/2018 9:45:40 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Benzoic acid	17	6.3	20	J	µg/L	1	5/18/2018 4:12:30 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 4:12:30 PM	38063
1-Methylnaphthalene	14	7.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 4:12:30 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 4:12:30 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Naphthalene	17	5.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 4:12:30 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 4:12:30 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Phenol	20	6.0	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 4:12:30 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 4:12:30 PM	38063
Surr: 2-Fluorophenol	38.9	0	15-114		%Rec	1	5/18/2018 4:12:30 PM	38063
Surr: Phenol-d5	35.7	0	15-97.9		%Rec	1	5/18/2018 4:12:30 PM	38063
Surr: 2,4,6-Tribromophenol	87.6	0	15-161		%Rec	1	5/18/2018 4:12:30 PM	38063
Surr: Nitrobenzene-d5	74.3	0	29.3-120		%Rec	1	5/18/2018 4:12:30 PM	38063
Surr: 2-Fluorobiphenyl	72.8	0	17.5-116		%Rec	1	5/18/2018 4:12:30 PM	38063
Surr: 4-Terphenyl-d14	102	0	21-92.2	S	%Rec	1	5/18/2018 4:12:30 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	7500	31	500		µg/L	500	5/16/2018 2:22:03 PM	A51325
Toluene	400	3.2	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Ethylbenzene	590	4.7	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Methyl tert-butyl ether (MTBE)	1700	12	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2,4-Trimethylbenzene	150	5.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,3,5-Trimethylbenzene	29	4.4	50	J	µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Naphthalene	17	5.7	100	J	µg/L	50	5/16/2018 2:51:18 PM	A51325
1-Methylnaphthalene	ND	8.0	200		µg/L	50	5/16/2018 2:51:18 PM	A51325
2-Methylnaphthalene	ND	7.6	200		µg/L	50	5/16/2018 2:51:18 PM	A51325
Acetone	ND	41	500		µg/L	50	5/16/2018 2:51:18 PM	A51325
Bromobenzene	ND	7.0	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Bromodichloromethane	ND	8.8	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Bromoform	ND	11	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Bromomethane	ND	13	150		µg/L	50	5/16/2018 2:51:18 PM	A51325
2-Butanone	ND	57	500		µg/L	50	5/16/2018 2:51:18 PM	A51325
Carbon disulfide	ND	20	500		µg/L	50	5/16/2018 2:51:18 PM	A51325
Carbon Tetrachloride	ND	5.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Chlorobenzene	ND	5.3	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Chloroethane	ND	12	100		µg/L	50	5/16/2018 2:51:18 PM	A51325
Chloroform	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Chloromethane	ND	15	150		µg/L	50	5/16/2018 2:51:18 PM	A51325
2-Chlorotoluene	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
4-Chlorotoluene	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
cis-1,2-DCE	ND	10	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	5/16/2018 2:51:18 PM	A51325
Dibromochloromethane	ND	3.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	4.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,4-Dichlorobenzene	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Dichlorodifluoromethane	ND	50	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1-Dichloroethane	ND	20	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1-Dichloroethene	ND	4.0	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2-Dichloropropane	ND	5.1	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,3-Dichloropropane	ND	8.4	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
2,2-Dichloropropane	ND	7.9	100		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1-Dichloropropene	ND	4.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Hexachlorobutadiene	ND	40	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
2-Hexanone	ND	33	500		µg/L	50	5/16/2018 2:51:18 PM	A51325
Isopropylbenzene	19	2.6	50	J	µg/L	50	5/16/2018 2:51:18 PM	A51325
4-Isopropyltoluene	ND	4.8	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
4-Methyl-2-pentanone	ND	35	500		µg/L	50	5/16/2018 2:51:18 PM	A51325
Methylene Chloride	ND	5.4	150		µg/L	50	5/16/2018 2:51:18 PM	A51325
n-Butylbenzene	ND	6.5	150		µg/L	50	5/16/2018 2:51:18 PM	A51325
n-Propylbenzene	50	3.7	50	J	µg/L	50	5/16/2018 2:51:18 PM	A51325
sec-Butylbenzene	ND	5.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Styrene	ND	7.8	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
tert-Butylbenzene	ND	5.2	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	5/16/2018 2:51:18 PM	A51325
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
trans-1,2-DCE	ND	9.2	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Trichlorofluoromethane	ND	9.1	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
1,2,3-Trichloropropane	ND	19	100		µg/L	50	5/16/2018 2:51:18 PM	A51325
Vinyl chloride	ND	8.9	50		µg/L	50	5/16/2018 2:51:18 PM	A51325
Xylenes, Total	330	16	75		µg/L	50	5/16/2018 2:51:18 PM	A51325
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	50	5/16/2018 2:51:18 PM	A51325
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	50	5/16/2018 2:51:18 PM	A51325
Surr: Dibromofluoromethane	109	0	70-130		%Rec	50	5/16/2018 2:51:18 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:10:00 AM
Lab ID: 1805523-004 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	96.2	0	70-130		%Rec	50	5/16/2018 2:51:18 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	24	0.48	2.5		mg/L	50	5/12/2018 1:38:43 AM	B51228
Surr: BFB	98.7	0	70-130		%Rec	50	5/12/2018 1:38:43 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.8	0.63	1.0		mg/L	1	5/15/2018 4:51:18 PM	38072
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/15/2018 4:51:18 PM	38072
Surr: DNOP	119	0	76.7-135		%Rec	1	5/15/2018 4:51:18 PM	38072
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 9:15:22 AM	R51212
Chloride	260	0.59	10		mg/L	20	5/10/2018 9:28:14 AM	R51212
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 9:15:22 AM	R51212
Bromide	2.1	0.13	0.50		mg/L	5	5/10/2018 9:15:22 AM	R51212
Nitrogen, Nitrate (As N)	0.24	0.033	0.50	J	mg/L	5	5/10/2018 9:15:22 AM	R51212
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 9:15:22 AM	R51212
Sulfate	34	1.0	2.5		mg/L	5	5/10/2018 9:15:22 AM	R51212
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	5/22/2018 11:15:06 PM	B51451
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:15:06 PM	B51451
Calcium	66	0.078	1.0		mg/L	1	5/22/2018 11:15:06 PM	B51451
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:15:06 PM	B51451
Copper	0.0075	0.0032	0.0060		mg/L	1	5/22/2018 11:15:06 PM	B51451
Iron	0.33	0.016	0.020	*	mg/L	1	5/23/2018 12:48:59 PM	B51452
Magnesium	17	0.25	1.0		mg/L	1	5/22/2018 11:15:06 PM	B51451
Manganese	1.4	0.0020	0.010	*	mg/L	5	5/23/2018 12:51:09 PM	B51452
Potassium	ND	0.11	1.0		mg/L	1	5/22/2018 11:15:06 PM	B51451
Silver	ND	0.0018	0.0050		mg/L	1	5/22/2018 11:15:06 PM	B51451
Sodium	440	0.82	5.0		mg/L	5	5/23/2018 12:51:09 PM	B51452
Zinc	0.0084	0.0021	0.010	J	mg/L	1	5/23/2018 12:48:59 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	5/18/2018 2:00:27 AM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:55:29 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 2:00:27 AM	38107
Copper	0.020	0.0041	0.0060		mg/L	1	5/18/2018 2:00:27 AM	38107
Iron	0.69	0.010	0.020	*	mg/L	1	5/18/2018 2:00:27 AM	38107
Manganese	1.5	0.0055	0.010	*	mg/L	5	5/22/2018 4:57:26 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 2:00:27 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 4:55:29 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0024	0.0021	0.0050	J	mg/L	5	5/17/2018 5:46:23 PM	B51361
Lead	0.0065	0.00087	0.0025		mg/L	5	5/17/2018 5:46:23 PM	B51361
Selenium	ND	0.0038	0.0050		mg/L	5	5/17/2018 5:46:23 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.057	0.00048	0.0025	*	mg/L	5	5/17/2018 5:46:23 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0032	0.00041	0.0010		mg/L	1	5/15/2018 11:02:58 AM	38107
Lead	0.0069	0.00023	0.00050		mg/L	1	5/15/2018 11:02:58 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 11:02:58 AM	38107
Uranium	0.058	0.00034	0.0025	*	mg/L	5	5/15/2018 11:54:58 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000050	0.000037	0.00020	J	mg/L	1	5/22/2018 9:47:56 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Benzoic acid	16	6.3	20	J	µg/L	1	5/18/2018 4:40:17 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 4:40:17 PM	38063
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 4:40:17 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 4:40:17 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 4:40:17 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 4:40:17 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Phenol	ND	6.0	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 4:40:17 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 4:40:17 PM	38063
Surr: 2-Fluorophenol	38.1	0	15-114		%Rec	1	5/18/2018 4:40:17 PM	38063
Surr: Phenol-d5	33.6	0	15-97.9		%Rec	1	5/18/2018 4:40:17 PM	38063
Surr: 2,4,6-Tribromophenol	93.4	0	15-161		%Rec	1	5/18/2018 4:40:17 PM	38063
Surr: Nitrobenzene-d5	59.7	0	29.3-120		%Rec	1	5/18/2018 4:40:17 PM	38063
Surr: 2-Fluorobiphenyl	65.6	0	17.5-116		%Rec	1	5/18/2018 4:40:17 PM	38063
Surr: 4-Terphenyl-d14	114	0	21-92.2	S	%Rec	1	5/18/2018 4:40:17 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	58	0.31	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Toluene	0.88	0.32	5.0	J	µg/L	5	5/16/2018 3:49:57 PM	A51325
Ethylbenzene	13	0.47	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Methyl tert-butyl ether (MTBE)	1800	12	50		µg/L	50	5/16/2018 3:20:36 PM	A51325
1,2,4-Trimethylbenzene	10	0.56	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,3,5-Trimethylbenzene	ND	0.44	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Naphthalene	ND	0.57	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
1-Methylnaphthalene	ND	0.80	20		µg/L	5	5/16/2018 3:49:57 PM	A51325
2-Methylnaphthalene	ND	0.76	20		µg/L	5	5/16/2018 3:49:57 PM	A51325
Acetone	ND	4.1	50		µg/L	5	5/16/2018 3:49:57 PM	A51325
Bromobenzene	ND	0.70	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Bromoform	ND	1.1	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Bromomethane	ND	1.3	15		µg/L	5	5/16/2018 3:49:57 PM	A51325
2-Butanone	ND	5.7	50		µg/L	5	5/16/2018 3:49:57 PM	A51325
Carbon disulfide	ND	2.0	50		µg/L	5	5/16/2018 3:49:57 PM	A51325
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Chloroethane	ND	1.2	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
Chloroform	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Chloromethane	ND	1.5	15		µg/L	5	5/16/2018 3:49:57 PM	A51325
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.45	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2-Dichlorobenzene	ND	0.45	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1-Dichloroethene	ND	0.40	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
2-Hexanone	ND	3.3	50		µg/L	5	5/16/2018 3:49:57 PM	A51325
Isopropylbenzene	ND	0.26	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
4-Isopropyltoluene	ND	0.48	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/16/2018 3:49:57 PM	A51325
Methylene Chloride	ND	0.54	15		µg/L	5	5/16/2018 3:49:57 PM	A51325
n-Butylbenzene	ND	0.65	15		µg/L	5	5/16/2018 3:49:57 PM	A51325
n-Propylbenzene	1.2	0.37	5.0	J	µg/L	5	5/16/2018 3:49:57 PM	A51325
sec-Butylbenzene	ND	0.55	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Styrene	ND	0.78	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/16/2018 3:49:57 PM	A51325
Vinyl chloride	ND	0.89	5.0		µg/L	5	5/16/2018 3:49:57 PM	A51325
Xylenes, Total	ND	1.6	7.5		µg/L	5	5/16/2018 3:49:57 PM	A51325
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	5/16/2018 3:49:57 PM	A51325
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	5	5/16/2018 3:49:57 PM	A51325
Surr: Dibromofluoromethane	110	0	70-130		%Rec	5	5/16/2018 3:49:57 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 9:40:00 AM
Lab ID: 1805523-005 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	97.6	0	70-130		%Rec	5	5/16/2018 3:49:57 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	2.1	0.0097	0.050		mg/L	1	5/12/2018 2:01:48 AM	B51228
Surr: BFB	100	0	70-130		%Rec	1	5/12/2018 2:01:48 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.0	0.63	1.0		mg/L	1	5/18/2018 12:53:35 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 12:53:35 AM	38097
Surr: DNOP	112	0	76.7-135		%Rec	1	5/18/2018 12:53:35 AM	38097
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 9:41:06 AM	R51212
Chloride	140	0.59	10		mg/L	20	5/10/2018 9:53:58 AM	R51212
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 9:41:06 AM	R51212
Bromide	2.1	0.13	0.50		mg/L	5	5/10/2018 9:41:06 AM	R51212
Nitrogen, Nitrate (As N)	0.23	0.033	0.50	J	mg/L	5	5/10/2018 9:41:06 AM	R51212
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 9:41:06 AM	R51212
Sulfate	1.5	1.0	2.5	J	mg/L	5	5/10/2018 9:41:06 AM	R51212
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.8	0.0099	0.020	*	mg/L	10	5/24/2018 8:04:22 PM	A51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:17:20 PM	B51451
Calcium	120	0.39	5.0		mg/L	5	5/23/2018 12:59:18 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:17:20 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 11:17:20 PM	B51451
Iron	2.8	0.16	0.20	*	mg/L	10	5/24/2018 8:04:22 PM	A51516
Magnesium	17	0.25	1.0		mg/L	1	5/22/2018 11:17:20 PM	B51451
Manganese	2.2	0.0020	0.010	*	mg/L	5	5/23/2018 12:59:18 PM	B51452
Potassium	0.93	0.11	1.0	J	mg/L	1	5/22/2018 11:17:20 PM	B51451
Silver	0.0019	0.0018	0.0050	J	mg/L	1	5/22/2018 11:17:20 PM	B51451
Sodium	290	1.6	10		mg/L	10	5/24/2018 8:04:22 PM	A51516
Zinc	0.0069	0.0021	0.010	J	mg/L	1	5/23/2018 12:53:26 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.2	0.010	0.020	*	mg/L	10	5/22/2018 5:01:44 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 4:59:46 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 2:12:15 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 2:12:15 AM	38107
Iron	6.0	0.10	0.20	*	mg/L	10	5/22/2018 5:01:44 PM	38107
Manganese	2.6	0.011	0.020	*	mg/L	10	5/22/2018 5:01:44 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 2:12:15 AM	38107
Zinc	0.0046	0.0033	0.010	J	mg/L	1	5/22/2018 4:59:46 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/17/2018 5:48:47 PM	B51361
Lead	ND	0.00087	0.0025		mg/L	5	5/17/2018 5:48:47 PM	B51361
Selenium	ND	0.0038	0.0050		mg/L	5	5/17/2018 5:48:47 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00048	0.0025		mg/L	5	5/17/2018 5:48:47 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0059	0.00041	0.0010		mg/L	1	5/15/2018 11:05:19 AM	38107
Lead	0.0012	0.00023	0.00050		mg/L	1	5/15/2018 11:05:19 AM	38107
Selenium	ND	0.00098	0.0010		mg/L	1	5/15/2018 11:05:19 AM	38107
Uranium	0.00065	0.000068	0.00050		mg/L	1	5/15/2018 11:05:19 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000044	0.000037	0.00020	J	mg/L	1	5/22/2018 9:50:13 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Benzoic acid	19	6.3	20	J	µg/L	1	5/18/2018 5:08:00 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 5:08:00 PM	38063
1-Methylnaphthalene	38	7.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Methylnaphthalene	10	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 5:08:00 PM	38063
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 5:08:00 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Naphthalene	25	5.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 5:08:00 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 5:08:00 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Phenol	27	6.0	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 5:08:00 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 5:08:00 PM	38063
Surr: 2-Fluorophenol	16.7	0	15-114		%Rec	1	5/18/2018 5:08:00 PM	38063
Surr: Phenol-d5	18.5	0	15-97.9		%Rec	1	5/18/2018 5:08:00 PM	38063
Surr: 2,4,6-Tribromophenol	52.8	0	15-161		%Rec	1	5/18/2018 5:08:00 PM	38063
Surr: Nitrobenzene-d5	22.9	0	29.3-120	S	%Rec	1	5/18/2018 5:08:00 PM	38063
Surr: 2-Fluorobiphenyl	26.2	0	17.5-116		%Rec	1	5/18/2018 5:08:00 PM	38063
Surr: 4-Terphenyl-d14	59.4	0	21-92.2		%Rec	1	5/18/2018 5:08:00 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	12000	62	1000		µg/L	1E+	5/16/2018 4:19:19 PM	A51325
Toluene	30	6.4	100	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
Ethylbenzene	560	9.3	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Methyl tert-butyl ether (MTBE)	120	24	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2,4-Trimethylbenzene	ND	11	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,3,5-Trimethylbenzene	ND	8.7	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Naphthalene	110	11	200	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
1-Methylnaphthalene	120	16	400	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
2-Methylnaphthalene	ND	15	400		µg/L	100	5/16/2018 4:48:38 PM	A51325
Acetone	ND	82	1000		µg/L	100	5/16/2018 4:48:38 PM	A51325
Bromobenzene	ND	14	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Bromodichloromethane	ND	18	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Bromoform	ND	21	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Bromomethane	ND	26	300		µg/L	100	5/16/2018 4:48:38 PM	A51325
2-Butanone	ND	110	1000		µg/L	100	5/16/2018 4:48:38 PM	A51325
Carbon disulfide	ND	40	1000		µg/L	100	5/16/2018 4:48:38 PM	A51325
Carbon Tetrachloride	ND	11	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Chlorobenzene	ND	11	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Chloroethane	ND	23	200		µg/L	100	5/16/2018 4:48:38 PM	A51325
Chloroform	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Chloromethane	ND	29	300		µg/L	100	5/16/2018 4:48:38 PM	A51325
2-Chlorotoluene	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
4-Chlorotoluene	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
cis-1,2-DCE	ND	20	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	5/16/2018 4:48:38 PM	A51325
Dibromochloromethane	ND	7.2	100		µg/L	100	5/16/2018 4:48:38 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	9.1	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,3-Dichlorobenzene	ND	15	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,4-Dichlorobenzene	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Dichlorodifluoromethane	ND	100	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1-Dichloroethane	ND	40	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1-Dichloroethene	ND	8.1	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2-Dichloropropane	ND	10	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,3-Dichloropropane	ND	17	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
2,2-Dichloropropane	ND	16	200		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1-Dichloropropene	ND	9.3	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Hexachlorobutadiene	ND	80	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
2-Hexanone	ND	66	1000		µg/L	100	5/16/2018 4:48:38 PM	A51325
Isopropylbenzene	11	5.1	100	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
4-Isopropyltoluene	ND	9.6	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/16/2018 4:48:38 PM	A51325
Methylene Chloride	ND	11	300		µg/L	100	5/16/2018 4:48:38 PM	A51325
n-Butylbenzene	ND	13	300		µg/L	100	5/16/2018 4:48:38 PM	A51325
n-Propylbenzene	31	7.4	100	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
sec-Butylbenzene	ND	11	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Styrene	ND	16	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
tert-Butylbenzene	ND	10	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	5/16/2018 4:48:38 PM	A51325
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
trans-1,2-DCE	ND	18	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,1,2-Trichloroethane	ND	14	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Trichloroethene (TCE)	ND	11	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Trichlorofluoromethane	ND	18	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
1,2,3-Trichloropropane	ND	39	200		µg/L	100	5/16/2018 4:48:38 PM	A51325
Vinyl chloride	ND	18	100		µg/L	100	5/16/2018 4:48:38 PM	A51325
Xylenes, Total	110	32	150	J	µg/L	100	5/16/2018 4:48:38 PM	A51325
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	100	5/16/2018 4:48:38 PM	A51325
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	100	5/16/2018 4:48:38 PM	A51325
Surr: Dibromofluoromethane	109	0	70-130		%Rec	100	5/16/2018 4:48:38 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:10:00 AM
Lab ID: 1805523-006 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	95.9	0	70-130		%Rec	100	5/16/2018 4:48:38 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	27	0.48	2.5		mg/L	50	5/12/2018 2:24:53 AM	B51228
Surr: BFB	104	0	70-130		%Rec	50	5/12/2018 2:24:53 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 12:25:00 PM
Lab ID: 1805523-007
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	9.0	0.63	1.0		mg/L	1	5/18/2018 2:06:03 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 2:06:03 AM	38097
Surr: DNOP	115	0	76.7-135		%Rec	1	5/18/2018 2:06:03 AM	38097
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	46000	120	2000		µg/L	2E+	5/16/2018 5:17:55 PM	A51325
Toluene	5000	13	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Ethylbenzene	1500	19	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Methyl tert-butyl ether (MTBE)	1200	48	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2,4-Trimethylbenzene	340	23	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,3,5-Trimethylbenzene	31	17	200	J	µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2-Dichloroethane (EDC)	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2-Dibromoethane (EDB)	ND	26	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Naphthalene	95	23	400	J	µg/L	200	5/16/2018 5:47:10 PM	A51325
1-Methylnaphthalene	ND	32	800		µg/L	200	5/16/2018 5:47:10 PM	A51325
2-Methylnaphthalene	ND	30	800		µg/L	200	5/16/2018 5:47:10 PM	A51325
Acetone	ND	160	2000		µg/L	200	5/16/2018 5:47:10 PM	A51325
Bromobenzene	ND	28	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Bromodichloromethane	ND	35	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Bromoform	ND	42	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Bromomethane	ND	51	600		µg/L	200	5/16/2018 5:47:10 PM	A51325
2-Butanone	ND	230	2000		µg/L	200	5/16/2018 5:47:10 PM	A51325
Carbon disulfide	ND	80	2000		µg/L	200	5/16/2018 5:47:10 PM	A51325
Carbon Tetrachloride	ND	22	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Chlorobenzene	ND	21	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Chloroethane	ND	47	400		µg/L	200	5/16/2018 5:47:10 PM	A51325
Chloroform	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Chloromethane	ND	59	600		µg/L	200	5/16/2018 5:47:10 PM	A51325
2-Chlorotoluene	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
4-Chlorotoluene	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
cis-1,2-DCE	ND	41	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
cis-1,3-Dichloropropene	ND	16	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2-Dibromo-3-chloropropane	ND	280	400		µg/L	200	5/16/2018 5:47:10 PM	A51325
Dibromochloromethane	ND	14	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Dibromomethane	ND	18	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2-Dichlorobenzene	ND	18	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,3-Dichlorobenzene	ND	30	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,4-Dichlorobenzene	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Dichlorodifluoromethane	ND	200	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1-Dichloroethane	ND	80	200		µg/L	200	5/16/2018 5:47:10 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 12:25:00 PM
Lab ID: 1805523-007
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	16	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2-Dichloropropane	ND	20	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,3-Dichloropropane	ND	33	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
2,2-Dichloropropane	ND	31	400		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1-Dichloropropene	ND	19	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Hexachlorobutadiene	ND	160	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
2-Hexanone	ND	130	2000		µg/L	200	5/16/2018 5:47:10 PM	A51325
Isopropylbenzene	13	10	200	J	µg/L	200	5/16/2018 5:47:10 PM	A51325
4-Isopropyltoluene	ND	19	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
4-Methyl-2-pentanone	ND	140	2000		µg/L	200	5/16/2018 5:47:10 PM	A51325
Methylene Chloride	ND	22	600		µg/L	200	5/16/2018 5:47:10 PM	A51325
n-Butylbenzene	ND	26	600		µg/L	200	5/16/2018 5:47:10 PM	A51325
n-Propylbenzene	42	15	200	J	µg/L	200	5/16/2018 5:47:10 PM	A51325
sec-Butylbenzene	ND	22	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Styrene	ND	31	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
tert-Butylbenzene	ND	21	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1,1,2-Tetrachloroethane	ND	21	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1,2,2-Tetrachloroethane	ND	27	400		µg/L	200	5/16/2018 5:47:10 PM	A51325
Tetrachloroethene (PCE)	ND	26	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
trans-1,2-DCE	ND	37	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
trans-1,3-Dichloropropene	ND	44	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2,3-Trichlorobenzene	ND	23	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2,4-Trichlorobenzene	ND	28	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1,1-Trichloroethane	ND	15	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,1,2-Trichloroethane	ND	28	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Trichloroethene (TCE)	ND	22	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Trichlorofluoromethane	ND	37	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
1,2,3-Trichloropropane	ND	78	400		µg/L	200	5/16/2018 5:47:10 PM	A51325
Vinyl chloride	ND	36	200		µg/L	200	5/16/2018 5:47:10 PM	A51325
Xylenes, Total	4200	64	300		µg/L	200	5/16/2018 5:47:10 PM	A51325
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	200	5/16/2018 5:47:10 PM	A51325
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	200	5/16/2018 5:47:10 PM	A51325
Surr: Dibromofluoromethane	106	0	70-130		%Rec	200	5/16/2018 5:47:10 PM	A51325
Surr: Toluene-d8	96.9	0	70-130		%Rec	200	5/16/2018 5:47:10 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	120	1.9	10		mg/L	200	5/12/2018 2:47:59 AM	B51228
Surr: BFB	100	0	70-130		%Rec	200	5/12/2018 2:47:59 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018
Lab ID: 1805523-008
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	8.2	0.63	1.0		mg/L	1	5/18/2018 2:30:10 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 2:30:10 AM	38097
Surr: DNOP	115	0	76.7-135		%Rec	1	5/18/2018 2:30:10 AM	38097
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	48000	120	2000		µg/L	2E+	5/16/2018 6:16:26 PM	A51325
Toluene	5100	13	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Ethylbenzene	1600	19	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Methyl tert-butyl ether (MTBE)	1200	48	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2,4-Trimethylbenzene	330	23	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,3,5-Trimethylbenzene	31	17	200	J	µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2-Dichloroethane (EDC)	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2-Dibromoethane (EDB)	ND	26	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Naphthalene	96	23	400	J	µg/L	200	5/16/2018 6:45:40 PM	A51325
1-Methylnaphthalene	ND	32	800		µg/L	200	5/16/2018 6:45:40 PM	A51325
2-Methylnaphthalene	ND	30	800		µg/L	200	5/16/2018 6:45:40 PM	A51325
Acetone	ND	160	2000		µg/L	200	5/16/2018 6:45:40 PM	A51325
Bromobenzene	ND	28	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Bromodichloromethane	ND	35	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Bromoform	ND	42	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Bromomethane	ND	51	600		µg/L	200	5/16/2018 6:45:40 PM	A51325
2-Butanone	ND	230	2000		µg/L	200	5/16/2018 6:45:40 PM	A51325
Carbon disulfide	ND	80	2000		µg/L	200	5/16/2018 6:45:40 PM	A51325
Carbon Tetrachloride	ND	22	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Chlorobenzene	ND	21	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Chloroethane	ND	47	400		µg/L	200	5/16/2018 6:45:40 PM	A51325
Chloroform	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Chloromethane	ND	59	600		µg/L	200	5/16/2018 6:45:40 PM	A51325
2-Chlorotoluene	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
4-Chlorotoluene	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
cis-1,2-DCE	ND	41	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
cis-1,3-Dichloropropene	ND	16	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2-Dibromo-3-chloropropane	ND	280	400		µg/L	200	5/16/2018 6:45:40 PM	A51325
Dibromochloromethane	ND	14	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Dibromomethane	ND	18	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2-Dichlorobenzene	ND	18	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,3-Dichlorobenzene	ND	30	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,4-Dichlorobenzene	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Dichlorodifluoromethane	ND	200	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1-Dichloroethane	ND	80	200		µg/L	200	5/16/2018 6:45:40 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018
Lab ID: 1805523-008
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	16	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2-Dichloropropane	ND	20	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,3-Dichloropropane	ND	33	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
2,2-Dichloropropane	ND	31	400		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1-Dichloropropene	ND	19	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Hexachlorobutadiene	ND	160	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
2-Hexanone	ND	130	2000		µg/L	200	5/16/2018 6:45:40 PM	A51325
Isopropylbenzene	14	10	200	J	µg/L	200	5/16/2018 6:45:40 PM	A51325
4-Isopropyltoluene	ND	19	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
4-Methyl-2-pentanone	ND	140	2000		µg/L	200	5/16/2018 6:45:40 PM	A51325
Methylene Chloride	ND	22	600		µg/L	200	5/16/2018 6:45:40 PM	A51325
n-Butylbenzene	ND	26	600		µg/L	200	5/16/2018 6:45:40 PM	A51325
n-Propylbenzene	42	15	200	J	µg/L	200	5/16/2018 6:45:40 PM	A51325
sec-Butylbenzene	ND	22	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Styrene	ND	31	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
tert-Butylbenzene	ND	21	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1,1,2-Tetrachloroethane	ND	21	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1,2,2-Tetrachloroethane	ND	27	400		µg/L	200	5/16/2018 6:45:40 PM	A51325
Tetrachloroethene (PCE)	ND	26	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
trans-1,2-DCE	ND	37	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
trans-1,3-Dichloropropene	ND	44	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2,3-Trichlorobenzene	ND	23	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2,4-Trichlorobenzene	ND	28	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1,1-Trichloroethane	ND	15	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,1,2-Trichloroethane	ND	28	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Trichloroethene (TCE)	ND	22	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Trichlorofluoromethane	ND	37	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
1,2,3-Trichloropropane	ND	78	400		µg/L	200	5/16/2018 6:45:40 PM	A51325
Vinyl chloride	ND	36	200		µg/L	200	5/16/2018 6:45:40 PM	A51325
Xylenes, Total	4200	64	300		µg/L	200	5/16/2018 6:45:40 PM	A51325
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	200	5/16/2018 6:45:40 PM	A51325
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	200	5/16/2018 6:45:40 PM	A51325
Surr: Dibromofluoromethane	109	0	70-130		%Rec	200	5/16/2018 6:45:40 PM	A51325
Surr: Toluene-d8	98.6	0	70-130		%Rec	200	5/16/2018 6:45:40 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	120	1.9	10		mg/L	200	5/12/2018 3:10:59 AM	B51228
Surr: BFB	102	0	70-130		%Rec	200	5/12/2018 3:10:59 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:45:00 AM
Lab ID: 1805523-009
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/18/2018 2:54:11 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 2:54:11 AM	38097
Surr: DNOP	117	0	76.7-135		%Rec	1	5/18/2018 2:54:11 AM	38097
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Acetone	ND	0.82	10		µg/L	1	5/16/2018 11:26:53 AM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 11:26:53 AM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 11:26:53 AM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 11:45:00 AM
Lab ID: 1805523-009
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 11:26:53 AM	A51325
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 11:26:53 AM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 11:26:53 AM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 11:26:53 AM	A51325
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/16/2018 11:26:53 AM	A51325
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/16/2018 11:26:53 AM	A51325
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/16/2018 11:26:53 AM	A51325
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	5/16/2018 11:26:53 AM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/12/2018 3:33:58 AM	B51228
Surr: BFB	113	0	70-130		%Rec	1	5/12/2018 3:33:58 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 12:00:00 PM
Lab ID: 1805523-010
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/18/2018 3:18:25 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 3:18:25 AM	38097
Surr: DNOP	114	0	76.7-135		%Rec	1	5/18/2018 3:18:25 AM	38097
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Acetone	0.94	0.82	10	J	µg/L	1	5/16/2018 11:56:00 AM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 11:56:00 AM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 11:56:00 AM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 12:00:00 PM
Lab ID: 1805523-010
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 11:56:00 AM	A51325
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 11:56:00 AM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 11:56:00 AM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 11:56:00 AM	A51325
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	5/16/2018 11:56:00 AM	A51325
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/16/2018 11:56:00 AM	A51325
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/16/2018 11:56:00 AM	A51325
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	5/16/2018 11:56:00 AM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/12/2018 3:57:09 AM	B51228
Surr: BFB	105	0	70-130		%Rec	1	5/12/2018 3:57:09 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.7	0.63	1.0		mg/L	1	5/18/2018 3:42:31 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 3:42:31 AM	38097
Surr: DNOP	115	0	76.7-135		%Rec	1	5/18/2018 3:42:31 AM	38097
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	5/10/2018 10:06:50 AM	R51212
Chloride	150	0.59	10		mg/L	20	5/10/2018 10:19:42 AM	R51212
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/10/2018 10:06:50 AM	R51212
Bromide	1.6	0.13	0.50		mg/L	5	5/10/2018 10:06:50 AM	R51212
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/10/2018 10:06:50 AM	R51212
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/10/2018 10:06:50 AM	R51212
Sulfate	ND	1.0	2.5		mg/L	5	5/10/2018 10:06:50 AM	R51212
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.2	0.0099	0.020	*	mg/L	10	5/24/2018 8:13:02 PM	A51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/22/2018 11:23:21 PM	B51451
Calcium	120	0.39	5.0		mg/L	5	5/23/2018 1:17:43 PM	B51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/22/2018 11:23:21 PM	B51451
Copper	ND	0.0032	0.0060		mg/L	1	5/22/2018 11:23:21 PM	B51451
Iron	7.0	0.16	0.20	*	mg/L	10	5/24/2018 8:13:02 PM	A51516
Magnesium	35	0.25	1.0		mg/L	1	5/22/2018 11:23:21 PM	B51451
Manganese	2.0	0.0020	0.010	*	mg/L	5	5/23/2018 1:17:43 PM	B51452
Potassium	0.40	0.11	1.0	J	mg/L	1	5/22/2018 11:23:21 PM	B51451
Silver	0.0019	0.0018	0.0050	J	mg/L	1	5/22/2018 11:23:21 PM	B51451
Sodium	260	1.6	10		mg/L	10	5/24/2018 8:13:02 PM	A51516
Zinc	0.0095	0.0021	0.010	J	mg/L	1	5/23/2018 1:11:44 PM	B51452
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.3	0.010	0.020	*	mg/L	10	5/22/2018 5:12:16 PM	38107
Cadmium	ND	0.00058	0.0020		mg/L	1	5/22/2018 5:10:13 PM	38107
Chromium	ND	0.0018	0.0060		mg/L	1	5/18/2018 2:14:17 AM	38107
Copper	ND	0.0041	0.0060		mg/L	1	5/18/2018 2:14:17 AM	38107
Iron	8.1	0.10	0.20	*	mg/L	10	5/22/2018 5:12:16 PM	38107
Manganese	2.1	0.011	0.020	*	mg/L	10	5/22/2018 5:12:16 PM	38107
Silver	ND	0.0012	0.0050		mg/L	1	5/18/2018 2:14:17 AM	38107
Zinc	ND	0.0033	0.010		mg/L	1	5/22/2018 5:10:13 PM	38107
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0028	0.0021	0.0050	J	mg/L	5	5/17/2018 5:51:12 PM	B51361
Lead	ND	0.00087	0.0025		mg/L	5	5/17/2018 5:51:12 PM	B51361
Selenium	ND	0.0038	0.0050		mg/L	5	5/17/2018 5:51:12 PM	B51361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00048	0.0025		mg/L	5	5/17/2018 5:51:12 PM	B51361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0038	0.0021	0.0050	J	mg/L	5	5/15/2018 11:57:22 AM	38107
Lead	ND	0.00023	0.00050		mg/L	1	5/15/2018 11:19:33 AM	38107
Selenium	ND	0.0049	0.0050		mg/L	5	5/15/2018 11:57:22 AM	38107
Uranium	0.00021	0.000068	0.00050	J	mg/L	1	5/15/2018 11:19:33 AM	38107
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000043	0.000037	0.00020	J	mg/L	1	5/22/2018 9:52:31 AM	38233
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Aniline	ND	6.2	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzoic acid	25	6.3	20		µg/L	1	5/18/2018 5:35:51 PM	38063
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 5:35:51 PM	38063
1-Methylnaphthalene	74	7.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Methylnaphthalene	42	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 5:35:51 PM	38063
3+4-Methylphenol	7.1	5.4	10	J	µg/L	1	5/18/2018 5:35:51 PM	38063
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 5:35:51 PM	38063
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Naphthalene	99	5.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 5:35:51 PM	38063
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 5:35:51 PM	38063
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Phenol	50	6.0	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 5:35:51 PM	38063

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 5:35:51 PM	38063
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 5:35:51 PM	38063
Surr: 2-Fluorophenol	38.4	0	15-114		%Rec	1	5/18/2018 5:35:51 PM	38063
Surr: Phenol-d5	40.3	0	15-97.9		%Rec	1	5/18/2018 5:35:51 PM	38063
Surr: 2,4,6-Tribromophenol	86.1	0	15-161		%Rec	1	5/18/2018 5:35:51 PM	38063
Surr: Nitrobenzene-d5	61.2	0	29.3-120		%Rec	1	5/18/2018 5:35:51 PM	38063
Surr: 2-Fluorobiphenyl	68.2	0	17.5-116		%Rec	1	5/18/2018 5:35:51 PM	38063
Surr: 4-Terphenyl-d14	107	0	21-92.2	S	%Rec	1	5/18/2018 5:35:51 PM	38063
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	38000	62	1000		µg/L	1E+	5/16/2018 7:14:57 PM	A51325
Toluene	84	6.4	100	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
Ethylbenzene	1200	9.3	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Methyl tert-butyl ether (MTBE)	2800	24	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2,4-Trimethylbenzene	30	11	100	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
1,3,5-Trimethylbenzene	ND	8.7	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Naphthalene	170	11	200	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
1-Methylnaphthalene	100	16	400	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
2-Methylnaphthalene	54	15	400	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
Acetone	ND	82	1000		µg/L	100	5/16/2018 7:44:07 PM	A51325
Bromobenzene	ND	14	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Bromodichloromethane	ND	18	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Bromoform	ND	21	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Bromomethane	ND	26	300		µg/L	100	5/16/2018 7:44:07 PM	A51325
2-Butanone	ND	110	1000		µg/L	100	5/16/2018 7:44:07 PM	A51325
Carbon disulfide	ND	40	1000		µg/L	100	5/16/2018 7:44:07 PM	A51325
Carbon Tetrachloride	ND	11	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Chlorobenzene	ND	11	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Chloroethane	ND	23	200		µg/L	100	5/16/2018 7:44:07 PM	A51325
Chloroform	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Chloromethane	ND	29	300		µg/L	100	5/16/2018 7:44:07 PM	A51325
2-Chlorotoluene	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
4-Chlorotoluene	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
cis-1,2-DCE	ND	20	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	5/16/2018 7:44:07 PM	A51325
Dibromochloromethane	ND	7.2	100		µg/L	100	5/16/2018 7:44:07 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	9.1	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,3-Dichlorobenzene	ND	15	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,4-Dichlorobenzene	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Dichlorodifluoromethane	ND	100	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1-Dichloroethane	ND	40	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1-Dichloroethene	ND	8.1	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2-Dichloropropane	ND	10	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,3-Dichloropropane	ND	17	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
2,2-Dichloropropane	ND	16	200		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1-Dichloropropene	ND	9.3	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Hexachlorobutadiene	ND	80	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
2-Hexanone	ND	66	1000		µg/L	100	5/16/2018 7:44:07 PM	A51325
Isopropylbenzene	32	5.1	100	J	µg/L	100	5/16/2018 7:44:07 PM	A51325
4-Isopropyltoluene	ND	9.6	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/16/2018 7:44:07 PM	A51325
Methylene Chloride	ND	11	300		µg/L	100	5/16/2018 7:44:07 PM	A51325
n-Butylbenzene	ND	13	300		µg/L	100	5/16/2018 7:44:07 PM	A51325
n-Propylbenzene	100	7.4	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
sec-Butylbenzene	ND	11	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Styrene	ND	16	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
tert-Butylbenzene	ND	10	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	5/16/2018 7:44:07 PM	A51325
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
trans-1,2-DCE	ND	18	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,1,2-Trichloroethane	ND	14	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Trichloroethene (TCE)	ND	11	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Trichlorofluoromethane	ND	18	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
1,2,3-Trichloropropane	ND	39	200		µg/L	100	5/16/2018 7:44:07 PM	A51325
Vinyl chloride	ND	18	100		µg/L	100	5/16/2018 7:44:07 PM	A51325
Xylenes, Total	180	32	150		µg/L	100	5/16/2018 7:44:07 PM	A51325
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	100	5/16/2018 7:44:07 PM	A51325
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	100	5/16/2018 7:44:07 PM	A51325
Surr: Dibromofluoromethane	107	0	70-130		%Rec	100	5/16/2018 7:44:07 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/8/2018 1:00:00 PM
Lab ID: 1805523-011 **Matrix:** AQUEOUS **Received Date:** 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	97.4	0	70-130		%Rec	100	5/16/2018 7:44:07 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	72	0.48	2.5		mg/L	50	5/12/2018 4:20:11 AM	B51228
Surr: BFB	106	0	70-130		%Rec	50	5/12/2018 4:20:11 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805523-012
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Toluene	ND	0.064	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Naphthalene	ND	0.11	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Acetone	ND	0.82	10		µg/L	1	5/16/2018 12:25:09 PM	A51325
Bromobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Bromoform	ND	0.21	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Bromomethane	ND	0.26	3.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
2-Butanone	ND	1.1	10		µg/L	1	5/16/2018 12:25:09 PM	A51325
Carbon disulfide	ND	0.40	10		µg/L	1	5/16/2018 12:25:09 PM	A51325
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Chloroethane	ND	0.23	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Chloroform	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Chloromethane	ND	0.29	3.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Dibromomethane	ND	0.091	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805523-012
Matrix: AQUEOUS
Received Date: 5/9/2018 2:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
2-Hexanone	ND	0.66	10		µg/L	1	5/16/2018 12:25:09 PM	A51325
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/16/2018 12:25:09 PM	A51325
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Styrene	ND	0.16	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/16/2018 12:25:09 PM	A51325
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/16/2018 12:25:09 PM	A51325
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/16/2018 12:25:09 PM	A51325
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	1	5/16/2018 12:25:09 PM	A51325
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/16/2018 12:25:09 PM	A51325
Surr: Toluene-d8	97.0	0	70-130		%Rec	1	5/16/2018 12:25:09 PM	A51325
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/12/2018 4:43:18 AM	B51228
Surr: BFB	108	0	70-130		%Rec	1	5/12/2018 4:43:18 AM	B51228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675162** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	104	50	150			
Cadmium	0.0023	0.0020	0.002000	0	113	50	150			
Calcium	0.54	1.0	0.5000	0	107	50	150			J
Chromium	0.0060	0.0060	0.006000	0	101	50	150			
Copper	0.0044	0.0060	0.006000	0	73.0	50	150			J
Magnesium	0.48	1.0	0.5000	0	95.1	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.48	1.0	0.5000	0	95.7	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51451**	RunNo: **51451**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1675172** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.5	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	54	1.0	50.00	0	108	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**1805523-006EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID:	**B51451**		RunNo:	**51451**				
Prep Date:		Analysis Date:	**5/22/2018**		SeqNo:	**1675483**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Chromium	0.52	0.0060	0.5000	0	103	70	130			
Copper	0.51	0.0060	0.5000	0	102	70	130			
Magnesium	68	1.0	50.00	17.36	101	70	130			
Potassium	50	1.0	50.00	0.9281	99.0	70	130			
Silver	0.095	0.0050	0.1000	0.001930	92.9	70	130			

Sample ID	**1805523-006EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID:	**B51451**		RunNo:	**51451**				
Prep Date:		Analysis Date:	**5/22/2018**		SeqNo:	**1675484**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.52	0.0020	0.5000	0	104	70	130	1.29	20	
Chromium	0.52	0.0060	0.5000	0	105	70	130	1.59	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	1.57	20	
Magnesium	73	1.0	50.00	17.36	112	70	130	7.85	20	
Potassium	56	1.0	50.00	0.9281	110	70	130	10.1	20	
Silver	0.10	0.0050	0.1000	0.001930	101	70	130	7.73	20	

Sample ID	**1805523-011EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID:	**B51451**		RunNo:	**51451**				
Prep Date:		Analysis Date:	**5/22/2018**		SeqNo:	**1675486**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.51	0.0060	0.5000	0	102	70	130			
Copper	0.51	0.0060	0.5000	0	102	70	130			
Magnesium	87	1.0	50.00	35.05	103	70	130			
Potassium	52	1.0	50.00	0.3959	104	70	130			
Silver	0.092	0.0050	0.1000	0.001870	90.4	70	130			

Sample ID	**1805523-011EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID:	**B51451**		RunNo:	**51451**				
Prep Date:		Analysis Date:	**5/22/2018**		SeqNo:	**1675487**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130	3.67	20	
Chromium	0.49	0.0060	0.5000	0	98.6	70	130	3.85	20	
Copper	0.49	0.0060	0.5000	0	98.8	70	130	3.61	20	
Magnesium	87	1.0	50.00	35.05	104	70	130	0.282	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**1805523-011EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID:	**B51451**		RunNo:	**51451**				
Prep Date:		Analysis Date:	**5/22/2018**		SeqNo:	**1675487**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	52	1.0	50.00	0.3959	104	70	130	0.201	20	
Silver	0.088	0.0050	0.1000	0.001870	85.6	70	130	5.30	20	

Sample ID	**MB-B**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676345**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	**LCS-B**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676349**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Sodium	53	1.0	50.00	0	107	85	115			
Zinc	0.49	0.010	0.5000	0	98.7	85	115			

Sample ID	**LLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676350**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.49	1.0	0.5000	0	98.7	50	150			J
Iron	0.018	0.020	0.02000	0	87.9	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Sodium	0.43	1.0	0.5000	0	86.0	50	150			J
Zinc	0.0051	0.010	0.005000	0	101	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**1805523-006EMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676468**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0.006940	94.3	70	130			

Sample ID	**1805523-006EMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676469**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0.006940	95.8	70	130	1.55	20	

Sample ID	**1805523-006EMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676471**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	118.0	94.5	70	130			
Manganese	4.6	0.010	2.500	2.188	97.3	70	130			

Sample ID	**1805523-006EMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-57**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676472**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	118.0	93.8	70	130	0.511	20	
Manganese	4.8	0.010	2.500	2.188	104	70	130	3.62	20	

Sample ID	**1805523-011EMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676477**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0.009520	94.9	70	130			

Sample ID	**1805523-011EMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID: **B51452**			RunNo: **51452**				
Prep Date:		Analysis Date: **5/23/2018**			SeqNo: **1676478**	Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.47	0.010	0.5000	0.009520	92.7	70	130	2.33	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**1805523-011EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676480**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	380	5.0	250.0	124.9	101	70	130			
Manganese	4.5	0.010	2.500	2.012	99.3	70	130			

Sample ID	**1805523-011EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**OW-58**	Batch ID:	**B51452**		RunNo:	**51452**				
Prep Date:		Analysis Date:	**5/23/2018**		SeqNo:	**1676481**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	380	5.0	250.0	124.9	101	70	130	0.0265	20	
Manganese	4.5	0.010	2.500	2.012	97.6	70	130	0.986	20	

Sample ID	**MB-A**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**A51516**		RunNo:	**51516**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1679019**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A51516**		RunNo:	**51516**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1679020**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Iron	0.021	0.020	0.02000	0	107	50	150			
Sodium	0.50	1.0	0.5000	0	99.4	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A51516**		RunNo:	**51516**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1679021**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.0	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Sodium	51	1.0	50.00	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667610**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID	**LLLCS-38107**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667611**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	84.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Copper	0.0048	0.0060	0.006000	0	80.5	50	150			J
Iron	0.024	0.020	0.02000	0	120	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			

Sample ID	**LCS-38107**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**38107**	RunNo:	**51298**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1667612**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Manganese	0.47	0.0020	0.5000	0	94.2	85	115			

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51355**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**	SeqNo:	**1671236**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**LLLCS-38107**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**38107**		RunNo:	**51355**				
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**		SeqNo:	**1671237**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0064	0.0060	0.006000	0	107	50	150			
Silver	0.0054	0.0050	0.005000	0	107	50	150			
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID	**LCS-38107**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**38107**		RunNo:	**51355**				
Prep Date:	**5/14/2018**	Analysis Date:	**5/17/2018**		SeqNo:	**1671238**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0	97.6	85	115			
Silver	0.11	0.0050	0.1000	0	110	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669458** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669459** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	99.0	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.0	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	101	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669460** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.025	0.0010	0.02500	0	99.1	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID **1805523-001EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OW-60**	Batch ID: **B51316**	RunNo: **51316**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.15	0.0050	0.1250	0.002598	116	70	130			
Lead	0.052	0.0025	0.06250	0	82.8	70	130			
Selenium	0.16	0.0050	0.1250	0.02345	109	70	130			
Uranium	0.11	0.0025	0.06250	0.05039	97.0	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51361**	RunNo: **51361**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51361**	RunNo: **51361**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670669** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51361**	RunNo: **51361**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00089	0.0010	0.001000	0	89.4	50	150			J
Lead	0.00046	0.00050	0.0005000	0	91.6	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51361**	RunNo: **51361**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.7	85	115			
Lead	0.012	0.00050	0.01250	0	93.2	85	115			
Selenium	0.023	0.0010	0.02500	0	91.3	85	115			
Uranium	0.012	0.00050	0.01250	0	95.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**MB-38107**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666895**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38107**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666896**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.5	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.3	50	150			J
Selenium	0.00096	0.0010	0.001000	0	96.2	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.3	50	150			J

Sample ID	**MSLCS-38107**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38107**	RunNo:	**51277**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/15/2018**	SeqNo:	**1666897**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.2	85	115			
Lead	0.012	0.00050	0.01250	0	97.0	85	115			
Selenium	0.024	0.0010	0.02500	0	97.4	85	115			
Uranium	0.012	0.00050	0.01250	0	97.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID	**MB-38233**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38233**	RunNo:	**51419**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673437**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000038	0.00020								J

Sample ID	**LCS-38233**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38233**	RunNo:	**51419**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1673438**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A51144**	RunNo: **51144**
Prep Date:	Analysis Date: **5/9/2018**	SeqNo: **1662576** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.18	0.50								J
Sulfate	0.29	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A51144**	RunNo: **51144**
Prep Date:	Analysis Date: **5/9/2018**	SeqNo: **1662577** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	110	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.9	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.7	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.4	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **B51144**	RunNo: **51144**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1662632** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.18	0.50								J
Sulfate	0.22	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **B51144**	RunNo: **51144**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1662633** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.8	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **B51144**	RunNo: **51144**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1662633** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.4	0.50	10.00	0	94.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51212**	RunNo: **51212**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1664470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.19	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51212**	RunNo: **51212**
Prep Date:	Analysis Date: **5/10/2018**	SeqNo: **1664471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.3	90	110			
Chloride	4.6	0.50	5.000	0	91.0	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.0	90	110			
Bromide	2.3	0.10	2.500	0	93.7	90	110			
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	93.6	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.2	90	110			
Sulfate	9.0	0.50	10.00	0	90.0	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51493**	RunNo: **51493**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1677435** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**
12-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51493**	RunNo: **51493**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1677438** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.0	90	110			
Sulfate	9.6	0.50	10.00	0	95.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51493**	RunNo: **51493**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1677533** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.12	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51493**	RunNo: **51493**
Prep Date:	Analysis Date: **5/22/2018**	SeqNo: **1677534** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Sulfate	9.0	0.50	10.00	0	90.5	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51571**	RunNo: **51571**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51571**	RunNo: **51571**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB-38072**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38072**	RunNo: **51235**
Prep Date: **5/11/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		124	76.7	135			

Sample ID **LCS-38072**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38072**	RunNo: **51235**
Prep Date: **5/11/2018**	Analysis Date: **5/15/2018**	SeqNo: **1667034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	94.5	70	130			
Surr: DNOP	0.57		0.5000		115	76.7	135			

Sample ID **1805523-006BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-57**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670613** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	13	1.0	5.000	8.000	107	82.8	143			
Surr: DNOP	0.55		0.5000		109	76.7	135			

Sample ID **1805523-006BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-57**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670614** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	14	1.0	5.000	8.000	112	82.8	143	1.83	20	
Surr: DNOP	0.52		0.5000		105	76.7	135	0	0	

Sample ID **LCS-38097**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.52		0.5000		104	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **MB-38097**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669340** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	1.8	10								J
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669340** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669341** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669341** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **1805523-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-60**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669343** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	120	60.5	137			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	112	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID **1805523-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-60**	Batch ID: **A51325**	RunNo: **51325**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669344** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	60.5	137	6.22	20	
Toluene	22	1.0	20.00	0	108	70	130	1.31	20	
Chlorobenzene	21	1.0	20.00	0	105	70	130	0.586	20	
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130	4.14	20	
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130	5.98	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		107	70	130	0	0	
Surr: Toluene-d8	9.9		10.00		99.4	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **lcs-38063**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669313** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.0	39.7	103			
4-Chloro-3-methylphenol	170	10	200.0	0	85.2	40.5	108			
2-Chlorophenol	150	10	200.0	0	76.1	35	103			
1,4-Dichlorobenzene	68	10	100.0	0	67.9	24.7	93.7			
2,4-Dinitrotoluene	79	10	100.0	0	78.7	35.6	91.4			
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.0	41.6	114			
4-Nitrophenol	140	10	200.0	0	70.0	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	79.7	25.3	98.5			
Phenol	130	10	200.0	0	63.6	20.9	75.1			
Pyrene	83	10	100.0	0	82.5	45.6	108			
1,2,4-Trichlorobenzene	77	10	100.0	0	76.7	30.3	106			
Surr: 2-Fluorophenol	130		200.0		67.1	15	114			
Surr: Phenol-d5	120		200.0		62.3	15	97.9			
Surr: 2,4,6-Tribromophenol	180		200.0		89.1	15	161			
Surr: Nitrobenzene-d5	76		100.0		75.7	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	17.5	116			
Surr: 4-Terphenyl-d14	76		100.0		76.4	21	92.2			

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	15	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**
12-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **mb-38063**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38063**	RunNo: **51313**
Prep Date: **5/11/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669314** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		57.5	15	114			
Surr: Phenol-d5	95		200.0		47.7	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.0	15	161			
Surr: Nitrobenzene-d5	64		100.0		63.8	29.3	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.0	17.5	116			
Surr: 4-Terphenyl-d14	71		100.0		71.0	21	92.2			

Sample ID **lcs-38139**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672672** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.4	15	114			
Surr: Phenol-d5	120		200.0		61.5	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		96.8	15	161			
Surr: Nitrobenzene-d5	84		100.0		84.0	29.3	120			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		77.1	21	92.2			

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.9	15	114			
Surr: Phenol-d5	110		200.0		52.9	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.1	15	161			
Surr: Nitrobenzene-d5	72		100.0		72.3	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		72.9	17.5	116			
Surr: 4-Terphenyl-d14	75		100.0		75.2	21	92.2			

Sample ID **lcs-38430**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691737** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		60.1	15	114			
Surr: Phenol-d5	120		200.0		58.0	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.6	15	161			
Surr: Nitrobenzene-d5	72		100.0		71.8	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		74.2	17.5	116			
Surr: 4-Terphenyl-d14	78		100.0		77.8	21	92.2			

Sample ID **lcsd-38430**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691738** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		53.4	15	114	0	0	
Surr: Phenol-d5	89		200.0		44.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.9	15	161	0	0	
Surr: Nitrobenzene-d5	76		100.0		75.6	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	77		100.0		76.7	17.5	116	0	0	
Surr: 4-Terphenyl-d14	84		100.0		83.8	21	92.2	0	0	

Sample ID **mb-38430**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691739** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		60.1	15	114			
Surr: Phenol-d5	100		200.0		51.8	15	97.9			
Surr: 2,4,6-Tribromophenol	140		200.0		69.2	15	161			
Surr: Nitrobenzene-d5	73		100.0		72.8	29.3	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **mb-38430**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691739** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	76		100.0		76.5	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		76.7	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805523**

12-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling (OW)

Sample ID **2.5ug gro lcs2**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **B51228**	RunNo: **51228**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.8	70	130			
Surr: BFB	9.2		10.00		91.6	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **B51228**	RunNo: **51228**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1665267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		104	70	130			

Sample ID **1805523-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-60**	Batch ID: **B51228**	RunNo: **51228**
Prep Date:	Analysis Date: **5/12/2018**	SeqNo: **1665839** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	88.5	70	130			
Surr: BFB	9.5		10.00		95.2	70	130			

Sample ID **1805523-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-60**	Batch ID: **B51228**	RunNo: **51228**
Prep Date:	Analysis Date: **5/12/2018**	SeqNo: **1665840** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.43	0.050	0.5000	0	85.3	70	130	3.73	20	
Surr: BFB	10		10.00		103	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805523 | RcptNo: 1

Received By: Isaiah Ortiz 5/9/2018 2:45:00 PM IO

Completed By: Anne Thorne 5/10/2018 10:05:56 AM Anne Thorne

Reviewed By: IO 5/10/18

Labeled HB

Chain of Custody

		Yes	No	Not Present
1.	Is Chain of Custody complete?	☑	☐	☐
2.	How was the sample delivered?	Courier		

Log In

		Yes	No	NA
3.	Was an attempt made to cool the samples?	☑	☐	☐
4.	Were all samples received at a temperature of >0° C to 6.0°C	☑	☐	☐
5.	Sample(s) in proper container(s)?	☑	☐	
6.	Sufficient sample volume for indicated test(s)?	☑	☐	
7.	Are samples (except VOA and ONG) properly preserved?	☑	☐	
8.	Was preservative added to bottles?	☐	☑	☐
9.	VOA vials have zero headspace?	☑	☐	☐ No VOA Vials
10.	Were any sample containers received broken?	☐	☑	
11.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	☑	☐	
12.	Are matrices correctly identified on Chain of Custody?	☑	☐	
13.	Is it clear what analyses were requested?	☑	☐	
14.	Were all holding times able to be met? (If no, notify customer for authorization.)	☑	☐	

# of preserved bottles checked for pH: 7 (<2 or >12 unless noted)

Adjusted? NO

Checked by: LB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			
2	0.8	Good	Yes			
3	1.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 1.1 0.8 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	0740	H_2O	OW-60	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -1	Neat	-001											X						
				250 ml Amber-1	Neat	-001			X														
				250 ml Plastic-1	HNO_3	-001												X					
				125 ml Plastic-1	HNO_3	-001												X	X				
				125 ml Plastic-1	H_2SO_4	-001													X				
				125 ml Plastic-1	Neat	-001													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/9/18	7000		Courier		
				5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 1.1 0.8 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	0810	H_2O	OW-59	40ml VOA-5	HCl	002			X							X						
				1 Liter Amber -2	Neat	002											X						
				250 ml Amber-1	Neat	002			X														
				250 ml Plastic-1	HNO_3	002												X					
				125 ml Plastic-1	HNO_3	002												X	X				
				125 ml Plastic-1	H_2SO_4	002													X				
				125 ml Plastic-1	Neat	002													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/9/18	0700		Courier		
				5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐ Yes~~ ☐ No

Sample Temperature: 1.1 0.8 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	0840	H_2O	OW-56	40ml VOA-5	HCl	003			X							X						
				1 Liter Amber - 1	Neat	003											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	003												X	X			
				125 ml Plastic-1	H_2SO_4	003													X			
				125 ml Plastic-1	Neat	003													X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/9/18	0700			5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐ Yes~~ ☐ No

Sample Temperature: 1.1 / 0.8 / 0.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	0910	H_2O	OW-55	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber - 1	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/9/18	0700		Courier	5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: 1.1 0.4 0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	0940	H_2O	OW-54	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber -1	Neat	-005											X					
				250 ml Amber-1	Neat	-005			X													
				250 ml Plastic-1	HNO_3	-005												X				
				125 ml Plastic-1	HNO_3	-005												X	X			
				125 ml Plastic-1	H_2SO_4	-005													X			
				125 ml Plastic-1	Neat	-005													X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/9/18	0700		Courier	5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐ Yes~~ ☐ No

Sample Temperature: 1.1 1.4 0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	1110	H_2O	OW-57	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber - 1	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/9/18	0700			5/9/18	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (RW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☒ Yes~~ ☐ No

Sample Temperature: 1.1 0.8 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	1225	H_2O	RW-2	40ml VOA-5	HCl	001			X							X						
↓	↓	↓	↓	250 ml Amber-1	Neat	001			X													
5/8/18	—	H2O	DUP08	40 ML VOA-5	HCL	008			X							X						
↓	↓	↓	↓	250 ML AMBER-1	NEAT	008			X													
5/8/18	1145	H_2O	EB08	40 ML VOA-5	HCL	009			X							X						
↓	↓	↓	↓	250 ML AMBER-1	NEAT	009			X													
↓	1200	H_2O	FB08	40 ML VOA-5	HCL	010			X							X						
↓	↓	↓	↓	250 ML AMBER-1	NEAT	010			X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/9/18	0700		Courier		
				5/9/18	1445
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 1.1 0.8 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805523	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/8/18	1300	H_2O	OW-58	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -	Neat	001 Acrolein Ext											X					
				250 ml Amber-1	Neat	001			X													
				250 ml Plastic-1	HNO_3	001												X				
				125 ml Plastic-1	HNO_3	001												X	X			
				125 ml Plastic-1	H_2SO_4	001													X			
				125 ml Plastic-1	Neat	001													X			
5/8/18	—	H_2O	TRIP BLANK	40mL VOA-3	HCL	002										X						

Date: 5/9/18 Time: 0700 Relinquished by: _____ Received by: _____ Date: 5/9/18 Time: 1445

Date: _____ Time: _____ Relinquished by: _____ Received by: _____ Date: _____ Time: _____

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 15, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling MKTF OrderNo.: 1805651

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 8 sample(s) on 5/11/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	72	0.63	1.0		mg/L	1	5/18/2018 8:29:41 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 8:29:41 AM	38097
Surr: DNOP	111	0	76.7-135		%Rec	1	5/18/2018 8:29:41 AM	38097
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.47	0.15	0.50	J	mg/L	5	5/15/2018 10:33:27 PM	R51286
Chloride	920	2.9	50		mg/L	100	5/29/2018 9:41:55 PM	R51571
Bromide	1.6	0.13	0.50		mg/L	5	5/15/2018 10:33:27 PM	R51286
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/15/2018 10:33:27 PM	R51286
Sulfate	95	1.0	2.5		mg/L	5	5/15/2018 10:33:27 PM	R51286
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/16/2018 1:27:10 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.057	0.00099	0.0020		mg/L	1	5/31/2018 6:13:11 PM	B51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:28:47 PM	B51516
Calcium	21	0.078	1.0		mg/L	1	5/31/2018 6:13:11 PM	B51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 6:13:11 PM	B51646
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:28:47 PM	B51516
Iron	0.096	0.016	0.020		mg/L	1	5/31/2018 6:13:11 PM	B51646
Magnesium	2.8	0.25	1.0		mg/L	1	5/24/2018 9:28:47 PM	B51516
Manganese	0.17	0.00039	0.0020	*	mg/L	1	5/31/2018 6:13:11 PM	B51646
Potassium	1.3	0.11	1.0		mg/L	1	5/24/2018 9:28:47 PM	B51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:28:47 PM	B51516
Sodium	720	1.6	10		mg/L	10	5/31/2018 6:15:18 PM	B51646
Zinc	0.0060	0.0021	0.010	J	mg/L	1	5/31/2018 6:13:11 PM	B51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.080	0.0010	0.0020		mg/L	1	5/24/2018 5:38:58 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:38:58 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:38:58 PM	38260
Copper	0.0067	0.0041	0.0060		mg/L	1	5/24/2018 5:38:58 PM	38260
Iron	0.75	0.010	0.020	*	mg/L	1	5/24/2018 5:38:58 PM	38260
Manganese	0.15	0.0011	0.0020	*	mg/L	1	5/24/2018 5:38:58 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:38:58 PM	38260
Zinc	0.0085	0.0033	0.010	J	mg/L	1	5/24/2018 5:38:58 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/24/2018 2:36:11 PM	A51518
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:36:11 PM	A51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:36:11 PM	A51518
Uranium	0.0077	0.00096	0.0050		mg/L	10	5/24/2018 5:28:08 PM	C51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	5/23/2018 5:54:30 PM	38260
Lead	0.0011	0.00023	0.00050		mg/L	1	5/23/2018 5:54:30 PM	38260
Selenium	0.0012	0.00098	0.0010		mg/L	1	5/23/2018 5:54:30 PM	38260
Uranium	0.012	0.000068	0.00050		mg/L	1	5/23/2018 5:54:30 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000067	0.000037	0.00020	J	mg/L	1	6/1/2018 1:17:39 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Acenaphthylene	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Aniline	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Anthracene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Azobenzene	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benz(a)anthracene	ND	26	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benzo(a)pyrene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benzo(b)fluoranthene	ND	36	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benzo(k)fluoranthene	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Benzoic acid	69	32	100	J	µg/L	1	5/18/2018 6:03:47 PM	38139
Benzyl alcohol	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Butyl benzyl phthalate	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Carbazole	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Chloroaniline	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Chloronaphthalene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Chlorophenol	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Chrysene	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Di-n-butyl phthalate	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Di-n-octyl phthalate	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Dibenzofuran	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
1,2-Dichlorobenzene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
1,3-Dichlorobenzene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Diethyl phthalate	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Dimethyl phthalate	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2,4-Dichlorophenol	ND	29	100		µg/L	1	5/18/2018 6:03:47 PM	38139
2,4-Dimethylphenol	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	5/18/2018 6:03:47 PM	38139
2,4-Dinitrophenol	ND	19	100		µg/L	1	5/18/2018 6:03:47 PM	38139
2,4-Dinitrotoluene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2,6-Dinitrotoluene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Fluoranthene	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Fluorene	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Hexachlorobenzene	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Hexachlorobutadiene	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Hexachloroethane	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Isophorone	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
1-Methylnaphthalene	340	35	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Methylnaphthalene	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Methylphenol	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
3+4-Methylphenol	ND	27	50		µg/L	1	5/18/2018 6:03:47 PM	38139
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	5/18/2018 6:03:47 PM	38139
N-Nitrosodimethylamine	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Naphthalene	ND	25	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Nitroaniline	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139
3-Nitroaniline	ND	34	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Nitroaniline	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Nitrobenzene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2-Nitrophenol	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
4-Nitrophenol	ND	28	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Pentachlorophenol	ND	26	100		µg/L	1	5/18/2018 6:03:47 PM	38139
Phenanthrene	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Phenol	ND	30	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Pyrene	ND	33	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Pyridine	ND	27	50		µg/L	1	5/18/2018 6:03:47 PM	38139
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	5/18/2018 6:03:47 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	5/18/2018 6:03:47 PM	38139
Surr: 2-Fluorophenol	46.6	0	15-114		%Rec	1	5/18/2018 6:03:47 PM	38139
Surr: Phenol-d5	32.9	0	15-97.9		%Rec	1	5/18/2018 6:03:47 PM	38139
Surr: 2,4,6-Tribromophenol	45.5	0	15-161		%Rec	1	5/18/2018 6:03:47 PM	38139
Surr: Nitrobenzene-d5	70.8	0	29.3-120		%Rec	1	5/18/2018 6:03:47 PM	38139
Surr: 2-Fluorobiphenyl	60.3	0	17.5-116		%Rec	1	5/18/2018 6:03:47 PM	38139
Surr: 4-Terphenyl-d14	57.3	0	21-92.2		%Rec	1	5/18/2018 6:03:47 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9.3	0.062	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Toluene	0.76	0.064	1.0	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
Ethylbenzene	1.6	0.093	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Methyl tert-butyl ether (MTBE)	3.8	0.24	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2,4-Trimethylbenzene	8.6	0.11	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,3,5-Trimethylbenzene	4.0	0.087	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2-Dichloroethane (EDC)	2.2	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Naphthalene	29	0.11	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1-Methylnaphthalene	19	0.16	4.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
2-Methylnaphthalene	10	0.15	4.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Acetone	37	0.82	10		µg/L	1	5/15/2018 3:58:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
2-Butanone	8.8	1.1	10	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 3:58:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1-Dichloroethene	0.26	0.081	1.0	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 3:58:00 PM	R51293
Isopropylbenzene	0.55	0.051	1.0	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
4-Isopropyltoluene	3.6	0.096	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
4-Methyl-2-pentanone	2.3	0.71	10	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
n-Propylbenzene	0.56	0.074	1.0	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
sec-Butylbenzene	0.28	0.11	1.0	J	µg/L	1	5/15/2018 3:58:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 3:58:00 PM	R51293
Xylenes, Total	31	0.32	1.5		µg/L	1	5/15/2018 3:58:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	5/15/2018 3:58:00 PM	R51293
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	5/15/2018 3:58:00 PM	R51293
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/15/2018 3:58:00 PM	R51293
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/15/2018 3:58:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 12:35:00 PM
Lab ID: 1805651-001 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.40	0.0097	0.050		mg/L	1	5/15/2018 8:00:03 PM	A51264
Surr: BFB	107	0	70-130		%Rec	1	5/15/2018 8:00:03 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/17/2018 3:31:39 AM	38126
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/18/2018 8:53:37 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 8:53:37 AM	38097
Surr: DNOP	115	0	76.7-135		%Rec	1	5/18/2018 8:53:37 AM	38097
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/15/2018 10:58:16 PM	R51286
Chloride	0.14	0.029	0.50	J	mg/L	1	5/15/2018 10:58:16 PM	R51286
Bromide	ND	0.027	0.10		mg/L	1	5/15/2018 10:58:16 PM	R51286
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/15/2018 10:58:16 PM	R51286
Sulfate	ND	0.21	0.50		mg/L	1	5/15/2018 10:58:16 PM	R51286
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/16/2018 1:39:35 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/31/2018 6:17:31 PM	B51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:30:55 PM	B51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 6:17:31 PM	B51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 6:17:31 PM	B51646
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:30:55 PM	B51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 6:17:31 PM	B51646
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 9:30:55 PM	B51516
Manganese	ND	0.00039	0.0020		mg/L	1	5/31/2018 6:17:31 PM	B51646
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 9:30:55 PM	B51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:30:55 PM	B51516
Sodium	ND	0.16	1.0		mg/L	1	5/24/2018 9:30:55 PM	B51516
Zinc	0.0094	0.0021	0.010	J	mg/L	1	5/31/2018 6:17:31 PM	B51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/24/2018 5:40:58 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:40:58 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:40:58 PM	38260
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 5:40:58 PM	38260
Iron	ND	0.010	0.020		mg/L	1	5/24/2018 5:40:58 PM	38260
Manganese	ND	0.0011	0.0020		mg/L	1	5/24/2018 5:40:58 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:40:58 PM	38260
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 5:40:58 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 5:44:14 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:38:30 PM	A51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:38:30 PM	A51518
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:29:19 PM	C51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/23/2018 5:56:47 PM	38260
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 5:56:47 PM	38260
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 5:56:47 PM	38260
Uranium	ND	0.000068	0.00050		mg/L	1	5/23/2018 5:56:47 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000063	0.000037	0.00020	J	mg/L	1	6/1/2018 1:24:19 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Benzoic acid	14	6.3	20	J	µg/L	1	5/18/2018 6:31:57 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 6:31:57 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 6:31:57 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 6:31:57 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 6:31:57 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 6:31:57 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 6:31:57 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 6:31:57 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 6:31:57 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 6:31:57 PM	38139
Surr: 2-Fluorophenol	35.0	0	15-114		%Rec	1	5/18/2018 6:31:57 PM	38139
Surr: Phenol-d5	24.2	0	15-97.9		%Rec	1	5/18/2018 6:31:57 PM	38139
Surr: 2,4,6-Tribromophenol	60.4	0	15-161		%Rec	1	5/18/2018 6:31:57 PM	38139
Surr: Nitrobenzene-d5	49.7	0	29.3-120		%Rec	1	5/18/2018 6:31:57 PM	38139
Surr: 2-Fluorobiphenyl	50.5	0	17.5-116		%Rec	1	5/18/2018 6:31:57 PM	38139
Surr: 4-Terphenyl-d14	46.4	0	21-92.2		%Rec	1	5/18/2018 6:31:57 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1-Methylnaphthalene	0.74	0.16	4.0	J	µg/L	1	5/15/2018 4:22:00 PM	R51293
2-Methylnaphthalene	0.50	0.15	4.0	J	µg/L	1	5/15/2018 4:22:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 4:22:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 4:22:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 4:22:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 4:22:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 4:22:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 4:22:00 PM	R51293
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/15/2018 4:22:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/15/2018 4:22:00 PM	R51293
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/15/2018 4:22:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 1:15:00 PM
Lab ID: 1805651-002
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/15/2018 4:22:00 PM	R51293
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/15/2018 4:22:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 2:07:18 PM	A51264
Surr: BFB	106	0	70-130		%Rec	1	5/14/2018 2:07:18 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/17/2018 4:17:21 AM	38126
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/18/2018 9:17:26 AM	38097
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/18/2018 9:17:26 AM	38097
Surr: DNOP	113	0	76.7-135		%Rec	1	5/18/2018 9:17:26 AM	38097
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/15/2018 11:23:05 PM	R51286
Chloride	0.12	0.029	0.50	J	mg/L	1	5/15/2018 11:23:05 PM	R51286
Bromide	ND	0.027	0.10		mg/L	1	5/15/2018 11:23:05 PM	R51286
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/15/2018 11:23:05 PM	R51286
Sulfate	ND	0.21	0.50		mg/L	1	5/15/2018 11:23:05 PM	R51286
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/16/2018 1:51:59 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/31/2018 6:44:34 PM	C51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:33:07 PM	B51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 6:44:34 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 6:44:34 PM	C51646
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:33:07 PM	B51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 6:44:34 PM	C51646
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 9:33:07 PM	B51516
Manganese	ND	0.00039	0.0020		mg/L	1	5/31/2018 6:44:34 PM	C51646
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 9:33:07 PM	B51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:33:07 PM	B51516
Sodium	ND	0.16	1.0		mg/L	1	5/24/2018 9:33:07 PM	B51516
Zinc	0.0092	0.0021	0.010	J	mg/L	1	5/31/2018 6:44:34 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/24/2018 5:43:09 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:43:09 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:43:09 PM	38260
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 5:43:09 PM	38260
Iron	ND	0.010	0.020		mg/L	1	5/24/2018 5:43:09 PM	38260
Manganese	ND	0.0011	0.0020		mg/L	1	5/24/2018 5:43:09 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:43:09 PM	38260
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 5:43:09 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 5:46:39 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:40:49 PM	A51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:40:49 PM	A51518
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:32:58 PM	C51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/23/2018 6:03:40 PM	38260
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 6:03:40 PM	38260
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 6:03:40 PM	38260
Uranium	ND	0.000068	0.00050		mg/L	1	5/23/2018 6:03:40 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000063	0.000037	0.00020	J	mg/L	1	6/1/2018 1:26:34 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Benzoic acid	11	6.3	20	J	µg/L	1	5/18/2018 7:00:09 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 7:00:09 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 7:00:09 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 7:00:09 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 7:00:09 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 7:00:09 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 7:00:09 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 7:00:09 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 7:00:09 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 7:00:09 PM	38139
Surr: 2-Fluorophenol	42.8	0	15-114		%Rec	1	5/18/2018 7:00:09 PM	38139
Surr: Phenol-d5	28.4	0	15-97.9		%Rec	1	5/18/2018 7:00:09 PM	38139
Surr: 2,4,6-Tribromophenol	75.6	0	15-161		%Rec	1	5/18/2018 7:00:09 PM	38139
Surr: Nitrobenzene-d5	61.8	0	29.3-120		%Rec	1	5/18/2018 7:00:09 PM	38139
Surr: 2-Fluorobiphenyl	61.8	0	17.5-116		%Rec	1	5/18/2018 7:00:09 PM	38139
Surr: 4-Terphenyl-d14	67.7	0	21-92.2		%Rec	1	5/18/2018 7:00:09 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 4:46:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 4:46:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 4:46:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 4:46:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 4:46:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 4:46:00 PM	R51293
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/15/2018 4:46:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/15/2018 4:46:00 PM	R51293
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/15/2018 4:46:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:00:00 PM
Lab ID: 1805651-003
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/15/2018 4:46:00 PM	R51293
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/15/2018 4:46:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 2:30:18 PM	A51264
Surr: BFB	103	0	70-130		%Rec	1	5/14/2018 2:30:18 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/17/2018 4:47:46 AM	38126
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 5:17:07 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 5:17:07 PM	38098
Surr: DNOP	96.3	0	76.7-135		%Rec	1	5/16/2018 5:17:07 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.049	0.030	0.10	J	mg/L	1	5/15/2018 11:47:53 PM	R51286
Chloride	430	1.5	25		mg/L	50	5/29/2018 9:54:20 PM	R51571
Bromide	1.0	0.027	0.10		mg/L	1	5/15/2018 11:47:53 PM	R51286
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/15/2018 11:47:53 PM	R51286
Sulfate	83	4.1	10		mg/L	20	5/16/2018 12:00:18 AM	R51286
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/16/2018 2:04:23 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.045	0.00099	0.0020		mg/L	1	5/31/2018 6:46:43 PM	C51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:35:19 PM	B51516
Calcium	28	0.078	1.0		mg/L	1	5/31/2018 6:46:43 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 6:46:43 PM	C51646
Copper	0.0039	0.0032	0.0060	J	mg/L	1	5/24/2018 9:35:19 PM	B51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 6:46:43 PM	C51646
Magnesium	5.5	0.25	1.0		mg/L	1	5/24/2018 9:35:19 PM	B51516
Manganese	0.049	0.00039	0.0020		mg/L	1	5/31/2018 6:46:43 PM	C51646
Potassium	0.56	0.11	1.0	J	mg/L	1	5/24/2018 9:35:19 PM	B51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:35:19 PM	B51516
Sodium	590	1.6	10		mg/L	10	6/7/2018 6:53:00 PM	A51825
Zinc	0.0092	0.0021	0.010	J	mg/L	1	5/31/2018 6:46:43 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.055	0.0010	0.0020		mg/L	1	5/24/2018 5:45:18 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:45:18 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:45:18 PM	38260
Copper	0.0049	0.0041	0.0060	J	mg/L	1	5/24/2018 5:45:18 PM	38260
Iron	0.51	0.010	0.020	*	mg/L	1	5/24/2018 5:45:18 PM	38260
Manganese	0.060	0.0011	0.0020	*	mg/L	1	5/24/2018 5:45:18 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:45:18 PM	38260
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 5:45:18 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0026	0.0021	0.0050	J	mg/L	5	5/24/2018 2:43:08 PM	A51518
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:43:08 PM	A51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:43:08 PM	A51518
Uranium	0.050	0.00096	0.0050	*	mg/L	10	5/24/2018 5:34:09 PM	C51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0029	0.00041	0.0010		mg/L	1	5/23/2018 6:05:57 PM	38260
Lead	0.00043	0.00023	0.00050	J	mg/L	1	5/23/2018 6:05:57 PM	38260
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 6:05:57 PM	38260
Uranium	0.058	0.00034	0.0025	*	mg/L	5	6/1/2018 4:12:34 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000058	0.000037	0.00020	J	mg/L	1	6/1/2018 1:28:49 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzoic acid	28	6.3	20		µg/L	1	5/18/2018 7:28:25 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/18/2018 7:28:25 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/18/2018 7:28:25 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/18/2018 7:28:25 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/18/2018 7:28:25 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/18/2018 7:28:25 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/18/2018 7:28:25 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/18/2018 7:28:25 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/18/2018 7:28:25 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/18/2018 7:28:25 PM	38139
Surr: 2-Fluorophenol	44.9	0	15-114		%Rec	1	5/18/2018 7:28:25 PM	38139
Surr: Phenol-d5	32.6	0	15-97.9		%Rec	1	5/18/2018 7:28:25 PM	38139
Surr: 2,4,6-Tribromophenol	81.0	0	15-161		%Rec	1	5/18/2018 7:28:25 PM	38139
Surr: Nitrobenzene-d5	61.6	0	29.3-120		%Rec	1	5/18/2018 7:28:25 PM	38139
Surr: 2-Fluorobiphenyl	68.2	0	17.5-116		%Rec	1	5/18/2018 7:28:25 PM	38139
Surr: 4-Terphenyl-d14	63.1	0	21-92.2		%Rec	1	5/18/2018 7:28:25 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.40	0.062	1.0	J	µg/L	1	5/15/2018 5:10:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Methyl tert-butyl ether (MTBE)	820	2.4	10		µg/L	10	5/16/2018 2:37:00 PM	R51326
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2-Dichloroethane (EDC)	20	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 5:10:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 5:10:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 5:10:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
cis-1,2-DCE	2.3	0.20	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1-Dichloroethane	18	0.40	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1-Dichloroethene	29	0.081	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 5:10:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 5:10:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
sec-Butylbenzene	0.75	0.11	1.0	J	µg/L	1	5/15/2018 5:10:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1,1-Trichloroethane	0.38	0.073	1.0	J	µg/L	1	5/15/2018 5:10:00 PM	R51293
1,1,2-Trichloroethane	1.4	0.14	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Trichloroethene (TCE)	0.28	0.11	1.0	J	µg/L	1	5/15/2018 5:10:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 5:10:00 PM	R51293
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/15/2018 5:10:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/15/2018 5:10:00 PM	R51293
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/15/2018 5:10:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 2:25:00 PM
Lab ID: 1805651-004
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/15/2018 5:10:00 PM	R51293
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/15/2018 5:10:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.64	0.0097	0.050		mg/L	1	5/14/2018 2:53:24 PM	A51264
Surr: BFB	98.4	0	70-130		%Rec	1	5/14/2018 2:53:24 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/17/2018 5:02:53 AM	38126
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 6:24:00 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 6:24:00 PM	38098
Surr: DNOP	100	0	76.7-135		%Rec	1	5/16/2018 6:24:00 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.11	0.030	0.10		mg/L	1	5/11/2018 3:54:49 PM	R51222
Chloride	840	2.9	50		mg/L	100	5/16/2018 12:37:32 AM	R51286
Bromide	2.1	0.027	0.10		mg/L	1	5/11/2018 3:54:49 PM	R51222
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/11/2018 3:54:49 PM	R51222
Sulfate	56	4.1	10		mg/L	20	5/11/2018 4:07:41 PM	R51222
Nitrate+Nitrite as N	4.9	0.27	1.0		mg/L	5	5/16/2018 2:16:47 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.052	0.00099	0.0020		mg/L	1	5/24/2018 9:47:15 PM	B51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:47:15 PM	B51516
Calcium	13	0.078	1.0		mg/L	1	5/31/2018 6:59:32 PM	C51646
Chromium	0.0013	0.0013	0.0060	J	mg/L	1	5/24/2018 9:47:15 PM	B51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:47:15 PM	B51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 6:59:32 PM	C51646
Magnesium	1.7	0.25	1.0		mg/L	1	5/24/2018 9:47:15 PM	B51516
Manganese	0.0014	0.00039	0.0020	J	mg/L	1	5/31/2018 6:59:32 PM	C51646
Potassium	1.5	0.11	1.0		mg/L	1	5/24/2018 9:47:15 PM	B51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:47:15 PM	B51516
Sodium	670	1.6	10		mg/L	10	6/1/2018 5:07:22 PM	A51676
Zinc	0.0084	0.0021	0.010	J	mg/L	1	5/31/2018 6:59:32 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.085	0.0010	0.0020		mg/L	1	5/24/2018 5:53:57 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:53:57 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:53:57 PM	38260
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 5:53:57 PM	38260
Iron	1.1	0.051	0.10	*	mg/L	5	5/24/2018 10:34:02 PM	38260
Manganese	0.048	0.0011	0.0020		mg/L	1	5/24/2018 5:53:57 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:53:57 PM	38260
Zinc	0.0044	0.0033	0.010	J	mg/L	1	5/24/2018 5:53:57 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0024	0.0021	0.0050	J	mg/L	5	5/24/2018 3:08:46 PM	B51518
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:08:46 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	0.040	0.0038	0.0050		mg/L	5	5/24/2018 3:08:46 PM	B51518
Uranium	0.011	0.00096	0.0050		mg/L	10	5/24/2018 5:35:20 PM	C51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0026	0.00041	0.0010		mg/L	1	5/23/2018 6:33:26 PM	38260
Lead	0.0010	0.00023	0.00050		mg/L	1	5/23/2018 6:33:26 PM	38260
Selenium	0.039	0.00098	0.0010		mg/L	1	5/23/2018 6:33:26 PM	38260
Uranium	0.014	0.000068	0.00050		mg/L	1	5/23/2018 6:33:26 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000057	0.000037	0.00020	J	mg/L	1	6/1/2018 1:31:04 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Benzoic acid	16	6.3	20	J	µg/L	1	5/23/2018 9:13:46 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 9:13:46 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 9:13:46 AM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 9:13:46 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 9:13:46 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 9:13:46 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 9:13:46 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 9:13:46 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 9:13:46 AM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 9:13:46 AM	38139
Surr: 2-Fluorophenol	46.0	0	15-114		%Rec	1	5/23/2018 9:13:46 AM	38139
Surr: Phenol-d5	36.6	0	15-97.9		%Rec	1	5/23/2018 9:13:46 AM	38139
Surr: 2,4,6-Tribromophenol	88.3	0	15-161		%Rec	1	5/23/2018 9:13:46 AM	38139
Surr: Nitrobenzene-d5	71.3	0	29.3-120		%Rec	1	5/23/2018 9:13:46 AM	38139
Surr: 2-Fluorobiphenyl	78.3	0	17.5-116		%Rec	1	5/23/2018 9:13:46 AM	38139
Surr: 4-Terphenyl-d14	63.6	0	21-92.2		%Rec	1	5/23/2018 9:13:46 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Methyl tert-butyl ether (MTBE)	1.6	0.24	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2-Dichloroethane (EDC)	4.0	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1-Methylnaphthalene	0.57	0.16	4.0	J	µg/L	1	5/15/2018 5:34:00 PM	R51293
2-Methylnaphthalene	0.51	0.15	4.0	J	µg/L	1	5/15/2018 5:34:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 5:34:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 5:34:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 5:34:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1-Dichloroethane	4.8	0.40	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1-Dichloroethene	7.3	0.081	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 5:34:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 5:34:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,1,2-Trichloroethane	0.79	0.14	1.0	J	µg/L	1	5/15/2018 5:34:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 5:34:00 PM	R51293
Xylenes, Total	0.47	0.32	1.5	J	µg/L	1	5/15/2018 5:34:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/15/2018 5:34:00 PM	R51293
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/15/2018 5:34:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 3:40:00 PM
Lab ID: 1805651-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	5/15/2018 5:34:00 PM	R51293
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/15/2018 5:34:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 3:16:26 PM	A51264
Surr: BFB	104	0	70-130		%Rec	1	5/14/2018 3:16:26 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 6:46:17 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 6:46:17 PM	38098
Surr: DNOP	99.1	0	76.7-135		%Rec	1	5/16/2018 6:46:17 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.59	2.0		mg/L	20	5/11/2018 4:33:24 PM	R51222
Chloride	7600	29	500		mg/L	1E+	5/16/2018 12:49:57 AM	R51286
Bromide	4.8	0.54	2.0		mg/L	20	5/11/2018 4:33:24 PM	R51222
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 4:20:32 PM	R51222
Sulfate	810	4.1	10		mg/L	20	5/11/2018 4:33:24 PM	R51222
Nitrate+Nitrite as N	6.5	1.1	4.0		mg/L	20	6/4/2018 8:18:04 PM	R51740
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.057	0.00099	0.0020		mg/L	1	5/24/2018 9:49:25 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:49:25 PM	C51516
Calcium	1300	3.9	50		mg/L	50	5/31/2018 7:08:23 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 9:49:25 PM	C51516
Copper	0.0057	0.0032	0.0060	J	mg/L	1	5/24/2018 9:49:25 PM	C51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 7:03:54 PM	C51646
Magnesium	170	1.2	5.0		mg/L	5	5/31/2018 7:06:07 PM	C51646
Manganese	1.7	0.0020	0.010	*	mg/L	5	5/31/2018 7:06:07 PM	C51646
Potassium	5.3	0.11	1.0		mg/L	1	5/24/2018 9:49:25 PM	C51516
Silver	0.017	0.0018	0.0050		mg/L	1	5/24/2018 9:49:25 PM	C51516
Sodium	3400	8.2	50		mg/L	50	5/31/2018 7:08:23 PM	C51646
Zinc	0.0064	0.0021	0.010	J	mg/L	1	5/31/2018 7:03:54 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.19	0.0010	0.0020		mg/L	1	5/24/2018 5:55:57 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:55:57 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:55:57 PM	38260
Copper	0.011	0.0041	0.0060		mg/L	1	5/24/2018 5:55:57 PM	38260
Iron	6.0	0.10	0.20	*	mg/L	10	5/29/2018 6:27:12 PM	38260
Manganese	3.2	0.0055	0.010	*	mg/L	5	5/24/2018 10:45:55 PM	38260
Silver	0.020	0.0012	0.0050		mg/L	1	5/24/2018 5:55:57 PM	38260
Zinc	0.017	0.0033	0.010		mg/L	1	5/24/2018 5:55:57 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.010	0.0042	0.010	*	mg/L	10	5/24/2018 2:59:26 PM	A51518
Lead	ND	0.0017	0.0050		mg/L	10	5/24/2018 2:59:26 PM	A51518
Selenium	ND	0.0076	0.010		mg/L	10	5/24/2018 2:59:26 PM	A51518
Uranium	0.086	0.00096	0.0050	*	mg/L	10	5/24/2018 5:36:32 PM	C51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0057	0.0041	0.010	J	mg/L	10	6/5/2018 2:28:56 PM	38260
Lead	0.0091	0.0011	0.0025		mg/L	5	6/1/2018 4:16:24 PM	38260
Selenium	0.034	0.0049	0.0050		mg/L	5	6/1/2018 4:16:24 PM	38260
Uranium	0.12	0.00068	0.0050	*	mg/L	10	6/5/2018 2:28:56 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000061	0.000037	0.00020	J	mg/L	1	6/1/2018 1:33:19 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Benzoic acid	10	6.3	20	J	µg/L	1	5/23/2018 9:41:23 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 9:41:23 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 9:41:23 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 9:41:23 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 9:41:23 AM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 9:41:23 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 9:41:23 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 9:41:23 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 9:41:23 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 9:41:23 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 9:41:23 AM	38139
Surr: 2-Fluorophenol	1.88	0	15-114	S	%Rec	1	5/23/2018 9:41:23 AM	38139
Surr: Phenol-d5	2.93	0	15-97.9	S	%Rec	1	5/23/2018 9:41:23 AM	38139
Surr: 2,4,6-Tribromophenol	0.620	0	15-161	S	%Rec	1	5/23/2018 9:41:23 AM	38139
Surr: Nitrobenzene-d5	68.4	0	29.3-120		%Rec	1	5/23/2018 9:41:23 AM	38139
Surr: 2-Fluorobiphenyl	65.6	0	17.5-116		%Rec	1	5/23/2018 9:41:23 AM	38139
Surr: 4-Terphenyl-d14	57.4	0	21-92.2		%Rec	1	5/23/2018 9:41:23 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 5:58:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 5:58:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 5:58:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Chloroform	0.72	0.40	1.0	J	µg/L	1	5/15/2018 5:58:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 5:58:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 5:58:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 5:58:00 PM	R51293
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/15/2018 5:58:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	5/15/2018 5:58:00 PM	R51293
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/15/2018 5:58:00 PM	R51293
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/15/2018 5:58:00 PM	R51293
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/15/2018 5:58:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018 5:55:00 PM
Lab ID: 1805651-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 3:39:28 PM	A51264
Surr: BFB	103	0	70-130		%Rec	1	5/14/2018 3:39:28 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	67	0.63	1.0		mg/L	1	5/16/2018 7:08:35 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 7:08:35 PM	38098
Surr: DNOP	99.0	0	76.7-135		%Rec	1	5/16/2018 7:08:35 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.50	0.15	0.50	J	mg/L	5	5/16/2018 1:02:21 AM	R51286
Chloride	940	2.9	50		mg/L	100	5/29/2018 10:06:44 PM	R51571
Bromide	1.6	0.13	0.50		mg/L	5	5/16/2018 1:02:21 AM	R51286
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	5/16/2018 1:02:21 AM	R51286
Sulfate	95	1.0	2.5		mg/L	5	5/16/2018 1:02:21 AM	R51286
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/16/2018 3:18:51 AM	R51286
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.061	0.00099	0.0020		mg/L	1	5/24/2018 9:51:43 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:51:43 PM	C51516
Calcium	22	0.078	1.0		mg/L	1	5/31/2018 7:10:43 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 9:51:43 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:51:43 PM	C51516
Iron	0.10	0.016	0.020		mg/L	1	5/31/2018 7:10:43 PM	C51646
Magnesium	2.8	0.25	1.0		mg/L	1	5/24/2018 9:51:43 PM	C51516
Manganese	0.17	0.00039	0.0020	*	mg/L	1	5/31/2018 7:10:43 PM	C51646
Potassium	1.4	0.11	1.0		mg/L	1	5/24/2018 9:51:43 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:51:43 PM	C51516
Sodium	730	1.6	10		mg/L	10	6/7/2018 6:55:15 PM	A51825
Zinc	0.0092	0.0021	0.010	J	mg/L	1	5/31/2018 7:10:43 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.081	0.0010	0.0020		mg/L	1	5/24/2018 5:58:00 PM	38260
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 5:58:00 PM	38260
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 5:58:00 PM	38260
Copper	0.0046	0.0041	0.0060	J	mg/L	1	5/24/2018 5:58:00 PM	38260
Iron	0.80	0.010	0.020	*	mg/L	1	5/24/2018 5:58:00 PM	38260
Manganese	0.18	0.0011	0.0020	*	mg/L	1	5/24/2018 5:58:00 PM	38260
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 5:58:00 PM	38260
Zinc	0.0041	0.0033	0.010	J	mg/L	1	5/24/2018 5:58:00 PM	38260
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/24/2018 2:47:47 PM	A51518
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:47:47 PM	A51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:47:47 PM	A51518
Uranium	0.0086	0.00096	0.0050		mg/L	10	5/24/2018 5:37:45 PM	C51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	5/23/2018 6:10:31 PM	38260
Lead	0.00095	0.00023	0.00050		mg/L	1	5/23/2018 6:10:31 PM	38260
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 6:10:31 PM	38260
Uranium	0.010	0.000068	0.00050		mg/L	1	5/23/2018 6:10:31 PM	38260
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000070	0.000037	0.00020	J	mg/L	1	6/1/2018 1:35:36 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Acenaphthylene	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Aniline	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Anthracene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Azobenzene	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benz(a)anthracene	ND	26	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzo(a)pyrene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzo(b)fluoranthene	ND	36	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzo(g,h,i)perylene	ND	28	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzo(k)fluoranthene	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzoic acid	76	32	100	JD	µg/L	1	5/23/2018 10:08:57 AM	38139
Benzyl alcohol	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Bis(2-chloroethoxy)methane	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Bis(2-chloroethyl)ether	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Bis(2-chloroisopropyl)ether	ND	24	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Bis(2-ethylhexyl)phthalate	ND	40	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Bromophenyl phenyl ether	ND	35	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Butyl benzyl phthalate	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Carbazole	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Chloro-3-methylphenol	ND	28	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Chloroaniline	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Chloronaphthalene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Chlorophenol	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Chlorophenyl phenyl ether	ND	36	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Chrysene	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Di-n-butyl phthalate	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Di-n-octyl phthalate	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Dibenz(a,h)anthracene	ND	28	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Dibenzofuran	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
1,2-Dichlorobenzene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
1,3-Dichlorobenzene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
3,3´-Dichlorobenzidine	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Diethyl phthalate	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Dimethyl phthalate	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,4-Dichlorophenol	ND	29	100	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,4-Dimethylphenol	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4,6-Dinitro-2-methylphenol	ND	27	100	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,4-Dinitrophenol	ND	19	100	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,4-Dinitrotoluene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,6-Dinitrotoluene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Fluoranthene	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Fluorene	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Hexachlorobenzene	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Hexachlorobutadiene	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Hexachlorocyclopentadiene	ND	20	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Hexachloroethane	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Indeno(1,2,3-cd)pyrene	ND	35	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Isophorone	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
1-Methylnaphthalene	400	35	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Methylnaphthalene	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Methylphenol	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
3+4-Methylphenol	ND	27	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
N-Nitrosodi-n-propylamine	ND	31	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
N-Nitrosodimethylamine	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
N-Nitrosodiphenylamine	ND	33	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Naphthalene	ND	25	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Nitroaniline	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
3-Nitroaniline	ND	34	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Nitroaniline	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Nitrobenzene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2-Nitrophenol	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
4-Nitrophenol	ND	28	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Pentachlorophenol	ND	26	100	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Phenanthrene	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Phenol	ND	30	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Pyrene	ND	33	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Pyridine	ND	27	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
1,2,4-Trichlorobenzene	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
2,4,5-Trichlorophenol	ND	29	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	32	50	D	µg/L	1	5/23/2018 10:08:57 AM	38139
Surr: 2-Fluorophenol	49.3	0	15-114	D	%Rec	1	5/23/2018 10:08:57 AM	38139
Surr: Phenol-d5	39.9	0	15-97.9	D	%Rec	1	5/23/2018 10:08:57 AM	38139
Surr: 2,4,6-Tribromophenol	41.6	0	15-161	D	%Rec	1	5/23/2018 10:08:57 AM	38139
Surr: Nitrobenzene-d5	80.5	0	29.3-120	D	%Rec	1	5/23/2018 10:08:57 AM	38139
Surr: 2-Fluorobiphenyl	68.4	0	17.5-116	D	%Rec	1	5/23/2018 10:08:57 AM	38139
Surr: 4-Terphenyl-d14	65.1	0	21-92.2	D	%Rec	1	5/23/2018 10:08:57 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9.7	0.062	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Toluene	0.78	0.064	1.0	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
Ethylbenzene	1.8	0.093	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Methyl tert-butyl ether (MTBE)	3.9	0.24	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2,4-Trimethylbenzene	8.9	0.11	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,3,5-Trimethylbenzene	4.3	0.087	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2-Dichloroethane (EDC)	2.2	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Naphthalene	30	0.11	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1-Methylnaphthalene	20	0.16	4.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
2-Methylnaphthalene	11	0.15	4.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Acetone	41	0.82	10		µg/L	1	5/15/2018 6:22:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
2-Butanone	9.2	1.1	10	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 6:22:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 6:22:00 PM	R51293
Isopropylbenzene	0.57	0.051	1.0	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
4-Isopropyltoluene	3.8	0.096	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
4-Methyl-2-pentanone	2.2	0.71	10	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
n-Propylbenzene	0.59	0.074	1.0	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
sec-Butylbenzene	0.29	0.11	1.0	J	µg/L	1	5/15/2018 6:22:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 6:22:00 PM	R51293
Xylenes, Total	32	0.32	1.5		µg/L	1	5/15/2018 6:22:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	5/15/2018 6:22:00 PM	R51293
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/15/2018 6:22:00 PM	R51293
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	5/15/2018 6:22:00 PM	R51293
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/15/2018 6:22:00 PM	R51293
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/9/2018
Lab ID: 1805651-007
Matrix: AQUEOUS
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.36	0.0097	0.050		mg/L	1	5/14/2018 4:02:42 PM	A51264
Surr: BFB	98.0	0	70-130		%Rec	1	5/14/2018 4:02:42 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805651-008
Matrix: TRIP BLANK
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Toluene	ND	0.064	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Naphthalene	ND	0.11	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1-Methylnaphthalene	0.72	0.16	4.0	J	µg/L	1	5/15/2018 6:46:00 PM	R51293
2-Methylnaphthalene	0.52	0.15	4.0	J	µg/L	1	5/15/2018 6:46:00 PM	R51293
Acetone	ND	0.82	10		µg/L	1	5/15/2018 6:46:00 PM	R51293
Bromobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Bromoform	ND	0.21	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Bromomethane	ND	0.26	3.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
2-Butanone	ND	1.1	10		µg/L	1	5/15/2018 6:46:00 PM	R51293
Carbon disulfide	ND	0.40	10		µg/L	1	5/15/2018 6:46:00 PM	R51293
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Chloroethane	ND	0.23	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Chloroform	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Chloromethane	ND	0.29	3.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Dibromomethane	ND	0.091	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805651-008
Matrix: TRIP BLANK
Received Date: 5/11/2018 9:50:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
2-Hexanone	ND	0.66	10		µg/L	1	5/15/2018 6:46:00 PM	R51293
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/15/2018 6:46:00 PM	R51293
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Styrene	ND	0.16	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/15/2018 6:46:00 PM	R51293
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/15/2018 6:46:00 PM	R51293
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	5/15/2018 6:46:00 PM	R51293
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	5/15/2018 6:46:00 PM	R51293
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	5/15/2018 6:46:00 PM	R51293
Surr: Toluene-d8	112	0	70-130		%Rec	1	5/15/2018 6:46:00 PM	R51293

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679023** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	87.0	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Chromium	0.0064	0.0060	0.006000	0	106	50	150			
Copper	0.0059	0.0060	0.006000	0	98.7	50	150			J
Magnesium	0.48	1.0	0.5000	0	95.3	50	150			J
Potassium	0.46	1.0	0.5000	0	92.0	50	150			J
Silver	0.0045	0.0050	0.005000	0	90.0	50	150			J
Sodium	0.48	1.0	0.5000	0	96.5	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679024** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0	90.2	85	115			
Cadmium	0.47	0.0020	0.5000	0	93.1	85	115			
Chromium	0.46	0.0060	0.5000	0	92.4	85	115			
Copper	0.47	0.0060	0.5000	0	93.4	85	115			
Magnesium	57	1.0	50.00	0	113	85	115			
Potassium	56	1.0	50.00	0	112	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Sodium	57	1.0	50.00	0	115	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679026** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0063	0.0060	0.006000	0	105	50	150			
Copper	0.0061	0.0060	0.006000	0	102	50	150			
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Potassium	0.50	1.0	0.5000	0	100	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	92.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.5	85	115			
Chromium	0.47	0.0060	0.5000	0	94.2	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.099	0.0050	0.1000	0	99.3	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0059	0.0060	0.006000	0	98.5	50	150			J
Iron	0.019	0.020	0.02000	0	93.0	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Sodium	0.58	1.0	0.5000	0	115	50	150			J
Zinc	0.0055	0.010	0.005000	0	111	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.7	85	115			
Calcium	49	1.0	50.00	0	98.3	85	115			
Chromium	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.3	85	115			
Sodium	52	1.0	50.00	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	95.7	85	115			

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0013	0.0020								J
Calcium	0.18	1.0								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Magnesium	0.47	1.0	0.5000	0	94.1	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Sodium	0.57	1.0	0.5000	0	115	50	150			J
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685204** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Calcium	48	1.0	50.00	0	95.1	85	115			
Chromium	0.49	0.0060	0.5000	0	98.5	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Magnesium	46	1.0	50.00	0	92.2	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Sodium	50	1.0	50.00	0	99.6	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Sodium	0.17	1.0								J
Zinc	ND	0.010								

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51676**	RunNo: **51676**
Prep Date:	Analysis Date: **6/1/2018**	SeqNo: **1685686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51676**	RunNo: **51676**
Prep Date:	Analysis Date: **6/1/2018**	SeqNo: **1685687** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.57	1.0	0.5000	0	114	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51676**	RunNo: **51676**
Prep Date:	Analysis Date: **6/1/2018**	SeqNo: **1685688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51825**	RunNo: **51825**
Prep Date:	Analysis Date: **6/7/2018**	SeqNo: **1692517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A51825**		RunNo:	**51825**				
Prep Date:		Analysis Date:	**6/7/2018**		SeqNo:	**1692518**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.56	1.0	0.5000	0	111	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A51825**		RunNo:	**51825**				
Prep Date:		Analysis Date:	**6/7/2018**		SeqNo:	**1692519**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-38260**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38260**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-38260**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38260**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679040** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.8	85	115			
Chromium	0.49	0.0060	0.5000	0	97.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.6	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	96.5	85	115			

Sample ID **LLLCS-38260**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38260**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	97.5	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J
Zinc	0.0062	0.010	0.005000	0	123	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.9	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.6	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678360** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678361** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.2	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.6	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.7	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678362** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678362** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	95.0	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00054	0.00050	0.0005000	0	107	50	150			
Selenium	0.0011	0.0010	0.001000	0	106	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678400** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	105	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **1805651-005FMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-41**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.14	0.0050	0.1250	0.002434	113	70	130			
Lead	0.058	0.0025	0.06250	0	93.3	70	130			
Selenium	0.18	0.0050	0.1250	0.03982	112	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805651-005FMSD**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**MKTF-41**	Batch ID:	**B51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678404**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.15	0.0050	0.1250	0.002434	117	70	130	2.99	20	
Lead	0.061	0.0025	0.06250	0	97.1	70	130	4.02	20	
Selenium	0.19	0.0050	0.1250	0.03982	116	70	130	3.36	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**C51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678442**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**C51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678443**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00045	0.00050	0.0005000	0	90.0	50	150			J

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**C51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678444**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	90.7	85	115			

Sample ID	**LCSD**	SampType:	**LCSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSS02**	Batch ID:	**C51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678445**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	92.1	85	115	1.51	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38260**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38260**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677186**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38260**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38260**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677187**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00051	0.00050	0.0005000	0	103	50	150			
Selenium	0.00086	0.0010	0.001000	0	85.6	50	150			J
Uranium	0.00054	0.00050	0.0005000	0	108	50	150			

Sample ID	**MSLCS-38260**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38260**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677188**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.014	0.00050	0.01250	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-38431**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **38431**			RunNo: **51675**					
Prep Date:	**6/1/2018**	Analysis Date: **6/1/2018**			SeqNo: **1685638**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.3	80	120			

Sample ID	**MB-38431**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **38431**			RunNo: **51675**					
Prep Date:	**6/1/2018**	Analysis Date: **6/1/2018**			SeqNo: **1685639**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000055	0.00020								J

Sample ID	**1805651-001FMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**MKTF-42**	Batch ID: **38431**			RunNo: **51675**					
Prep Date:	**6/1/2018**	Analysis Date: **6/1/2018**			SeqNo: **1685641**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	.00006676	93.1	75	125			

Sample ID	**1805651-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**MKTF-42**	Batch ID: **38431**			RunNo: **51675**					
Prep Date:	**6/1/2018**	Analysis Date: **6/1/2018**			SeqNo: **1685642**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	.00006676	94.2	75	125	1.19	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51222**	RunNo: **51222**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664966** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.19	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51222**	RunNo: **51222**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664967** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.3	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.0	90	110			
Sulfate	9.2	0.50	10.00	0	92.2	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51286**	RunNo: **51286**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1668125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.11	0.50								J
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51286**	RunNo: **51286**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1668126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.9	0.50	5.000	0	97.1	90	110			
Bromide	2.5	0.10	2.500	0	99.2	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.2	90	110			
Sulfate	9.6	0.50	10.00	0	96.3	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R51571**	RunNo: **51571**							
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682464**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R51571**	RunNo: **51571**							
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682465**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R51740**	RunNo: **51740**							
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1688833**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R51740**	RunNo: **51740**							
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1688834**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MB-38126**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**38126**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670442**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-38126**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**38126**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/16/2018**	SeqNo:	**1670445**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.097	0.010	0.1000	0	97.5	70	130			

Sample ID	**1805651-002BMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**EB09**	Batch ID:	**38126**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/17/2018**	SeqNo:	**1670504**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.0096	0.09615	0	99.7	26.5	132			

Sample ID	**1805651-002BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**EB09**	Batch ID:	**38126**	RunNo:	**51359**					
Prep Date:	**5/16/2018**	Analysis Date:	**5/17/2018**	SeqNo:	**1670510**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.086	0.0095	0.09459	0	90.7	26.5	132	11.0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805651-004CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-32**	Batch ID: **38098**	RunNo: **51307**
Prep Date: **5/14/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	102	82.8	143			
Surr: DNOP	0.49		0.5000		98.8	76.7	135			

Sample ID **1805651-004CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-32**	Batch ID: **38098**	RunNo: **51307**
Prep Date: **5/14/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669137** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	82.8	143	5.72	20	
Surr: DNOP	0.50		0.5000		99.9	76.7	135	0	0	

Sample ID **LCS-38098**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38098**	RunNo: **51307**
Prep Date: **5/14/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	92.1	70	130			
Surr: DNOP	0.47		0.5000		93.0	76.7	135			

Sample ID **MB-38098**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38098**	RunNo: **51307**
Prep Date: **5/14/2018**	Analysis Date: **5/16/2018**	SeqNo: **1669156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.6	76.7	135			

Sample ID **LCS-38097**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.52		0.5000		104	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-38097**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38097**	RunNo: **51331**
Prep Date: **5/14/2018**	Analysis Date: **5/18/2018**	SeqNo: **1670629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51293**	RunNo: **51293**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667825** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	23	1.0	20.00	0	115	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51293**	RunNo: **51293**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667826** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.078	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	0.32	4.0								J
2-Methylnaphthalene	0.33	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.14	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51293**	RunNo: **51293**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667826** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51293**	RunNo: **51293**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667826** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51326**	RunNo: **51326**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669384** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51326**	RunNo: **51326**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669385** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38139**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.9	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	94.9	40.5	108			
2-Chlorophenol	160	10	200.0	0	79.9	35	103			
1,4-Dichlorobenzene	70	10	100.0	0	70.4	24.7	93.7			
2,4-Dinitrotoluene	88	10	100.0	0	87.9	35.6	91.4			
N-Nitrosodi-n-propylamine	85	10	100.0	0	85.0	41.6	114			
4-Nitrophenol	130	10	200.0	0	64.8	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.4	25.3	98.5			
Phenol	130	10	200.0	0	64.4	20.9	75.1			
Pyrene	86	10	100.0	0	86.1	45.6	108			
1,2,4-Trichlorobenzene	78	10	100.0	0	77.6	30.3	106			
Surr: 2-Fluorophenol	140		200.0		69.4	15	114			
Surr: Phenol-d5	120		200.0		61.5	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		96.8	15	161			
Surr: Nitrobenzene-d5	84		100.0		84.0	29.3	120			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		77.1	21	92.2			

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**	
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38139** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **38139** RunNo: **51373**
Prep Date: **5/16/2018** Analysis Date: **5/18/2018** SeqNo: **1672673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		64.9	15	114			
Surr: Phenol-d5	110		200.0		52.9	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.1	15	161			
Surr: Nitrobenzene-d5	72		100.0		72.3	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		72.9	17.5	116			
Surr: 4-Terphenyl-d14	75		100.0		75.2	21	92.2			

Sample ID **lcsd-38139** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **38139** RunNo: **51485**
Prep Date: **5/16/2018** Analysis Date: **5/23/2018** SeqNo: **1676998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	140	14	142.9	0	96.2	39.7	103	48.5	34.9	R
4-Chloro-3-methylphenol	270	14	285.7	0	94.6	40.5	108	35.0	30.2	R
2-Chlorophenol	260	14	285.7	0	89.3	35	103	46.0	49.5	
1,4-Dichlorobenzene	110	14	142.9	0	74.3	24.7	93.7	40.5	43.2	
2,4-Dinitrotoluene	160	14	142.9	0	110	35.6	91.4	56.2	49.9	RS
N-Nitrosodi-n-propylamine	120	14	142.9	0	83.4	41.6	114	33.4	42.1	
4-Nitrophenol	220	14	285.7	0	78.2	20.7	74.3	53.2	31.5	RS
Pentachlorophenol	290	29	285.7	0	102	25.3	98.5	56.5	52.5	RS
Phenol	150	14	285.7	0	53.5	20.9	75.1	17.1	54.4	
Pyrene	150	14	142.9	0	108	45.6	108	56.9	30.7	RS
1,2,4-Trichlorobenzene	120	14	142.9	0	85.1	30.3	106	44.2	48.1	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcsd-38139**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38139**	RunNo: **51485**
Prep Date: **5/16/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	190		285.7		67.7	15	114	0	0	
Surr: Phenol-d5	160		285.7		54.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	310		285.7		110	15	161	0	0	
Surr: Nitrobenzene-d5	140		142.9		97.1	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	140		142.9		98.2	17.5	116	0	0	
Surr: 4-Terphenyl-d14	110		142.9		78.6	21	92.2	0	0	

Sample ID **lcs-38430**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691737** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		60.1	15	114			
Surr: Phenol-d5	120		200.0		58.0	15	97.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.6	15	161			
Surr: Nitrobenzene-d5	72		100.0		71.8	29.3	120			
Surr: 2-Fluorobiphenyl	74		100.0		74.2	17.5	116			
Surr: 4-Terphenyl-d14	78		100.0		77.8	21	92.2			

Sample ID **lcsd-38430**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691738** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		53.4	15	114	0	0	
Surr: Phenol-d5	89		200.0		44.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.9	15	161	0	0	
Surr: Nitrobenzene-d5	76		100.0		75.6	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	77		100.0		76.7	17.5	116	0	0	
Surr: 4-Terphenyl-d14	84		100.0		83.8	21	92.2	0	0	

Sample ID **mb-38430**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691739** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		60.1	15	114			
Surr: Phenol-d5	100		200.0		51.8	15	97.9			
Surr: 2,4,6-Tribromophenol	140		200.0		69.2	15	161			
Surr: Nitrobenzene-d5	73		100.0		72.8	29.3	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38430**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38430**	RunNo: **51800**
Prep Date: **6/1/2018**	Analysis Date: **6/7/2018**	SeqNo: **1691739** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	76		100.0		76.5	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		76.7	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805651**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **1805651-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **EB09**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.57	0.050	0.5000	0	114	70	130			
Surr: BFB	9.6		10.00		96.4	70	130			

Sample ID **1805651-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **EB09**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.7	70	130	20.7	20	R
Surr: BFB	9.5		10.00		94.7	70	130	0	0	

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666370** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	70	130			
Surr: BFB	9.2		10.00		92.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805651 | RcptNo: 1

Received By: Isaiah Ortiz 5/11/2018 9:50:00 AM IO

Completed By: Ashley Gallegos 5/11/2018 10:37:53 AM AG

Reviewed By: JO 5.14.18 Labeled by: IO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 21 (<2 or >12 unless noted)

Adjusted? NO

Checked by: IO

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			
2	0.4	Good	Yes			
3	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805651	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	1235	H_2O	MKTF- 42	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/18	0100		Courier		
				5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	1315	H_2O	EB 09	40ml VOA-5	HCl	1805105 -002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -1	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/10/18	0700		J. O	5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805451	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	1400	H_2O	FB09	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/18	0700		Courier		
			I. Ol	5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805651	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	1425	H_2O	MKTF- 32	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -1	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/18	0700		Courier		
				5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805651	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	1540	H_2O	MKTF-41	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/10/18	0700		Courier	5/11/18	950

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 6.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805051	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
Analysis Request																						
5/9/18	1755	H_2O	MKTF-43	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/18	0700		I. Oat	5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☒~~ Yes ☐ No

Sample Temperature: 0.8 0.4 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805151	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/9/18	—	H_2O	DUP 09	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/9/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCL	-008										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/18	0700		Courier	5/11/18	950
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 15, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling MKTF OrderNo.: 1805682

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 13 sample(s) on 5/11/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805682**
Date Reported: **6/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 7:30:50 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 7:30:50 PM	38098
Surr: DNOP	103	0	76.7-135		%Rec	1	5/16/2018 7:30:50 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/11/2018 5:17:08 PM	R51220
Chloride	0.31	0.029	0.50	J	mg/L	1	5/11/2018 5:17:08 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 5:17:08 PM	R51220
Bromide	ND	0.027	0.10		mg/L	1	5/11/2018 5:17:08 PM	R51220
Nitrogen, Nitrate (As N)	0.032	0.0066	0.10	J	mg/L	1	5/11/2018 5:17:08 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 5:17:08 PM	R51220
Sulfate	ND	0.21	0.50		mg/L	1	5/11/2018 5:17:08 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/24/2018 9:53:50 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:53:50 PM	C51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 7:15:06 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 9:53:50 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 9:53:50 PM	C51516
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 7:15:06 PM	C51646
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 9:53:50 PM	C51516
Manganese	ND	0.00039	0.0020		mg/L	1	5/31/2018 7:15:06 PM	C51646
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 9:53:50 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:53:50 PM	C51516
Sodium	0.34	0.16	1.0	J	mg/L	1	5/24/2018 9:53:50 PM	C51516
Zinc	0.0070	0.0021	0.010	J	mg/L	1	5/31/2018 7:15:06 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	5/29/2018 8:18:55 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:18:55 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:18:55 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:18:55 PM	38326
Iron	ND	0.010	0.020		mg/L	1	5/29/2018 8:18:55 PM	38326
Manganese	ND	0.0011	0.0020		mg/L	1	5/29/2018 8:18:55 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:18:55 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:18:55 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 6:05:48 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 2:50:07 PM	A51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 2:50:07 PM	A51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:47:13 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	6/5/2018 3:39:05 PM	38326
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 3:39:05 PM	38326
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 3:39:05 PM	38326
Uranium	ND	0.000068	0.00050		mg/L	1	6/5/2018 3:39:05 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000060	0.000037	0.00020	J	mg/L	1	6/1/2018 1:42:29 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Benzoic acid	17	6.3	20	J	µg/L	1	5/23/2018 10:36:29 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 10:36:29 AM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 10:36:29 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 10:36:29 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 10:36:29 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 10:36:29 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 10:36:29 AM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 10:36:29 AM	38139
Surr: 2-Fluorophenol	40.4	0	15-114		%Rec	1	5/23/2018 10:36:29 AM	38139
Surr: Phenol-d5	27.5	0	15-97.9		%Rec	1	5/23/2018 10:36:29 AM	38139
Surr: 2,4,6-Tribromophenol	73.4	0	15-161		%Rec	1	5/23/2018 10:36:29 AM	38139
Surr: Nitrobenzene-d5	62.7	0	29.3-120		%Rec	1	5/23/2018 10:36:29 AM	38139
Surr: 2-Fluorobiphenyl	61.5	0	17.5-116		%Rec	1	5/23/2018 10:36:29 AM	38139
Surr: 4-Terphenyl-d14	53.8	0	21-92.2		%Rec	1	5/23/2018 10:36:29 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 1:14:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 1:14:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 1:14:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 1:14:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 1:14:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 1:14:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 1:14:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	5/17/2018 1:14:00 PM	R51363
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/17/2018 1:14:00 PM	R51363
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/17/2018 1:14:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:25:00 AM
Lab ID: 1805682-001
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/17/2018 1:14:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 5:35:09 PM	A51264
Surr: BFB	100	0	70-130		%Rec	1	5/14/2018 5:35:09 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 7:53:02 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 7:53:02 PM	38098
Surr: DNOP	101	0	76.7-135		%Rec	1	5/16/2018 7:53:02 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.16	0.030	0.10		mg/L	1	5/11/2018 5:41:58 PM	R51220
Chloride	240	0.59	10		mg/L	20	5/11/2018 5:54:22 PM	R51220
Nitrogen, Nitrite (As N)	0.066	0.048	0.10	J	mg/L	1	5/11/2018 5:41:58 PM	R51220
Bromide	0.37	0.027	0.10		mg/L	1	5/11/2018 5:41:58 PM	R51220
Nitrogen, Nitrate (As N)	1.1	0.0066	0.10		mg/L	1	5/11/2018 5:41:58 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 5:41:58 PM	R51220
Sulfate	95	4.1	10		mg/L	20	5/11/2018 5:54:22 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.038	0.00099	0.0020		mg/L	1	5/24/2018 9:55:58 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:55:58 PM	C51516
Calcium	6.9	0.078	1.0		mg/L	1	5/31/2018 7:17:18 PM	C51646
Chromium	0.0044	0.0013	0.0060	J	mg/L	1	5/31/2018 7:17:18 PM	C51646
Copper	0.0036	0.0032	0.0060	J	mg/L	1	5/24/2018 9:55:58 PM	C51516
Iron	0.087	0.016	0.020		mg/L	1	5/31/2018 7:17:18 PM	C51646
Magnesium	0.66	0.25	1.0	J	mg/L	1	5/24/2018 9:55:58 PM	C51516
Manganese	0.0034	0.00039	0.0020		mg/L	1	5/31/2018 7:17:18 PM	C51646
Potassium	1.1	0.11	1.0		mg/L	1	5/24/2018 9:55:58 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:55:58 PM	C51516
Sodium	490	1.6	10		mg/L	10	5/31/2018 7:27:32 PM	C51646
Zinc	0.0089	0.0021	0.010	J	mg/L	1	5/31/2018 7:17:18 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.084	0.0010	0.0020		mg/L	1	5/29/2018 8:31:47 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:31:47 PM	38326
Chromium	0.0064	0.0018	0.0060		mg/L	1	5/29/2018 8:31:47 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:31:47 PM	38326
Iron	5.5	0.10	0.20	*	mg/L	10	6/5/2018 4:01:37 PM	38448
Manganese	0.062	0.0011	0.0020	*	mg/L	1	5/29/2018 8:31:47 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:31:47 PM	38326
Zinc	0.013	0.0033	0.010		mg/L	1	5/29/2018 8:31:47 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0084	0.00042	0.0010		mg/L	1	5/21/2018 6:08:10 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:18:07 PM	B51518
Selenium	0.013	0.0038	0.0050		mg/L	5	5/24/2018 3:18:07 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.17	0.00096	0.0050	*	mg/L	10	5/24/2018 5:48:25 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0083	0.00041	0.0010		mg/L	1	6/5/2018 3:42:46 PM	38326
Lead	0.0041	0.00023	0.00050		mg/L	1	6/5/2018 3:42:46 PM	38326
Selenium	0.012	0.00098	0.0010		mg/L	1	6/5/2018 3:42:46 PM	38326
Uranium	0.19	0.0014	0.010	*	mg/L	20	6/5/2018 4:08:46 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000071	0.000037	0.00020	J	mg/L	1	6/1/2018 1:44:47 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 11:04:06 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 11:04:06 AM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 11:04:06 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 11:04:06 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 11:04:06 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 11:04:06 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:04:06 AM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 11:04:06 AM	38139
Surr: 2-Fluorophenol	45.9	0	15-114		%Rec	1	5/23/2018 11:04:06 AM	38139
Surr: Phenol-d5	34.0	0	15-97.9		%Rec	1	5/23/2018 11:04:06 AM	38139
Surr: 2,4,6-Tribromophenol	84.2	0	15-161		%Rec	1	5/23/2018 11:04:06 AM	38139
Surr: Nitrobenzene-d5	72.6	0	29.3-120		%Rec	1	5/23/2018 11:04:06 AM	38139
Surr: 2-Fluorobiphenyl	71.5	0	17.5-116		%Rec	1	5/23/2018 11:04:06 AM	38139
Surr: 4-Terphenyl-d14	55.5	0	21-92.2		%Rec	1	5/23/2018 11:04:06 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 2:26:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 2:26:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 2:26:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 2:26:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
4-Isopropyltoluene	0.16	0.096	1.0	J	µg/L	1	5/17/2018 2:26:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 2:26:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 2:26:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 2:26:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	5/17/2018 2:26:00 PM	R51363
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	5/17/2018 2:26:00 PM	R51363
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/17/2018 2:26:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 8:50:00 AM
Lab ID: 1805682-002 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/17/2018 2:26:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 5:58:11 PM	A51264
Surr: BFB	106	0	70-130		%Rec	1	5/14/2018 5:58:11 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.5	0.63	1.0		mg/L	1	5/16/2018 8:15:17 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 8:15:17 PM	38098
Surr: DNOP	102	0	76.7-135		%Rec	1	5/16/2018 8:15:17 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.15	0.030	0.10		mg/L	1	5/11/2018 6:06:46 PM	R51220
Chloride	100	0.59	10		mg/L	20	5/11/2018 6:19:11 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 6:06:46 PM	R51220
Bromide	0.55	0.027	0.10		mg/L	1	5/11/2018 6:06:46 PM	R51220
Nitrogen, Nitrate (As N)	0.15	0.0066	0.10		mg/L	1	5/11/2018 6:06:46 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 6:06:46 PM	R51220
Sulfate	210	4.1	10		mg/L	20	5/11/2018 6:19:11 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.042	0.00099	0.0020		mg/L	1	5/24/2018 9:58:01 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 9:58:01 PM	C51516
Calcium	75	0.078	1.0		mg/L	1	5/31/2018 7:29:34 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 9:58:01 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 7:29:34 PM	C51646
Iron	ND	0.016	0.020		mg/L	1	6/1/2018 5:09:35 PM	A51676
Magnesium	16	0.25	1.0		mg/L	1	5/24/2018 9:58:01 PM	C51516
Manganese	0.15	0.00039	0.0020	*	mg/L	1	5/31/2018 7:29:34 PM	C51646
Potassium	0.91	0.11	1.0	J	mg/L	1	5/24/2018 9:58:01 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 9:58:01 PM	C51516
Sodium	290	1.6	10		mg/L	10	5/31/2018 7:31:44 PM	C51646
Zinc	0.0069	0.0021	0.010	J	mg/L	1	5/31/2018 7:29:34 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.10	0.0010	0.0020		mg/L	1	5/29/2018 8:33:39 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:33:39 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:33:39 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:33:39 PM	38326
Iron	1.6	0.051	0.10	*	mg/L	5	6/5/2018 3:15:52 PM	38448
Manganese	0.22	0.0011	0.0020	*	mg/L	1	5/29/2018 8:33:39 PM	38326
Silver	0.0017	0.0012	0.0050	J	mg/L	1	5/29/2018 8:33:39 PM	38326
Zinc	0.0043	0.0033	0.010	J	mg/L	1	5/29/2018 8:33:39 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00076	0.00042	0.0010	J	mg/L	1	5/21/2018 6:10:32 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:27:27 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:27:27 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.032	0.00096	0.0050	*	mg/L	10	5/24/2018 5:49:36 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00059	0.00041	0.0010	J	mg/L	1	6/5/2018 3:53:57 PM	38326
Lead	0.0016	0.00023	0.00050		mg/L	1	6/5/2018 3:53:57 PM	38326
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 3:53:57 PM	38326
Uranium	0.034	0.00034	0.0025	*	mg/L	5	6/5/2018 4:12:28 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000064	0.000037	0.00020	J	mg/L	1	6/1/2018 1:47:04 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Benzoic acid	11	6.3	20	J	µg/L	1	5/23/2018 11:31:38 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 11:31:38 AM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 11:31:38 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 11:31:38 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 11:31:38 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 11:31:38 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:31:38 AM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 11:31:38 AM	38139
Surr: 2-Fluorophenol	35.7	0	15-114		%Rec	1	5/23/2018 11:31:38 AM	38139
Surr: Phenol-d5	27.4	0	15-97.9		%Rec	1	5/23/2018 11:31:38 AM	38139
Surr: 2,4,6-Tribromophenol	70.9	0	15-161		%Rec	1	5/23/2018 11:31:38 AM	38139
Surr: Nitrobenzene-d5	60.9	0	29.3-120		%Rec	1	5/23/2018 11:31:38 AM	38139
Surr: 2-Fluorobiphenyl	54.7	0	17.5-116		%Rec	1	5/23/2018 11:31:38 AM	38139
Surr: 4-Terphenyl-d14	53.5	0	21-92.2		%Rec	1	5/23/2018 11:31:38 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Methyl tert-butyl ether (MTBE)	570	2.4	10		µg/L	10	5/17/2018 2:51:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 3:15:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 3:15:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 3:15:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 3:15:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 3:15:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 3:15:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 3:15:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	99.8	0	70-130		%Rec	1	5/17/2018 3:15:00 PM	R51363
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/17/2018 3:15:00 PM	R51363
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/17/2018 3:15:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 9:40:00 AM
Lab ID: 1805682-003
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	109	0	70-130		%Rec	1	5/17/2018 3:15:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.50	0.0097	0.050		mg/L	1	5/14/2018 6:21:13 PM	A51264
Surr: BFB	104	0	70-130		%Rec	1	5/14/2018 6:21:13 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.5	0.63	1.0		mg/L	1	5/16/2018 8:37:25 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 8:37:25 PM	38098
Surr: DNOP	104	0	76.7-135		%Rec	1	5/16/2018 8:37:25 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.27	0.030	0.10		mg/L	1	5/11/2018 6:31:36 PM	R51220
Chloride	110	0.59	10		mg/L	20	5/11/2018 6:44:00 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 6:31:36 PM	R51220
Bromide	0.034	0.027	0.10	J	mg/L	1	5/11/2018 6:31:36 PM	R51220
Nitrogen, Nitrate (As N)	0.15	0.0066	0.10		mg/L	1	5/11/2018 6:31:36 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 6:31:36 PM	R51220
Sulfate	5.8	0.21	0.50		mg/L	1	5/11/2018 6:31:36 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.2	0.0099	0.020		mg/L	10	5/25/2018 12:37:25 AM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:00:09 PM	C51516
Calcium	130	0.39	5.0		mg/L	5	5/31/2018 7:35:52 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:00:09 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:00:09 PM	C51516
Iron	1.4	0.082	0.10	*	mg/L	5	6/6/2018 5:06:37 PM	A51787
Magnesium	26	0.25	1.0		mg/L	1	5/24/2018 10:00:09 PM	C51516
Manganese	2.4	0.0020	0.010	*	mg/L	5	5/31/2018 7:35:52 PM	C51646
Potassium	0.69	0.11	1.0	J	mg/L	1	5/24/2018 10:00:09 PM	C51516
Silver	0.0020	0.0018	0.0050	J	mg/L	1	5/24/2018 10:00:09 PM	C51516
Sodium	250	0.82	5.0		mg/L	5	5/31/2018 7:35:52 PM	C51646
Zinc	0.0057	0.0021	0.010	J	mg/L	1	5/31/2018 7:33:54 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	1.3	0.0050	0.010		mg/L	5	5/30/2018 4:42:45 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:35:38 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:35:38 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:35:38 PM	38326
Iron	4.4	0.051	0.10	*	mg/L	5	6/5/2018 3:18:06 PM	38448
Manganese	2.5	0.0055	0.010	*	mg/L	5	5/30/2018 4:42:45 PM	38326
Silver	0.0028	0.0012	0.0050	J	mg/L	1	5/29/2018 8:35:38 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:35:38 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	5/21/2018 6:12:57 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:29:46 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:29:46 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0019	0.00096	0.0050	J	mg/L	10	5/24/2018 5:50:48 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00091	0.00041	0.0010	J	mg/L	1	6/5/2018 3:57:38 PM	38326
Lead	0.00043	0.00023	0.00050	J	mg/L	1	6/5/2018 3:57:38 PM	38326
Selenium	0.0013	0.00098	0.0010		mg/L	1	6/5/2018 3:57:38 PM	38326
Uranium	0.0023	0.000068	0.00050		mg/L	1	6/5/2018 3:57:38 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000047	0.000037	0.00020	J	mg/L	1	6/1/2018 1:49:22 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Benzoic acid	17	6.3	20	J	µg/L	1	5/23/2018 11:59:09 AM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 11:59:09 AM	38139
1-Methylnaphthalene	33	7.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 11:59:09 AM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 11:59:09 AM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Naphthalene	12	5.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 11:59:09 AM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 11:59:09 AM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Phenol	17	6.0	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 11:59:09 AM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 11:59:09 AM	38139
Surr: 2-Fluorophenol	45.9	0	15-114		%Rec	1	5/23/2018 11:59:09 AM	38139
Surr: Phenol-d5	35.4	0	15-97.9		%Rec	1	5/23/2018 11:59:09 AM	38139
Surr: 2,4,6-Tribromophenol	80.3	0	15-161		%Rec	1	5/23/2018 11:59:09 AM	38139
Surr: Nitrobenzene-d5	65.6	0	29.3-120		%Rec	1	5/23/2018 11:59:09 AM	38139
Surr: 2-Fluorobiphenyl	67.4	0	17.5-116		%Rec	1	5/23/2018 11:59:09 AM	38139
Surr: 4-Terphenyl-d14	61.6	0	21-92.2		%Rec	1	5/23/2018 11:59:09 AM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2500	6.2	100		µg/L	100	5/17/2018 3:39:00 PM	R51363
Toluene	8.8	0.64	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
Ethylbenzene	150	0.93	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Methyl tert-butyl ether (MTBE)	5900	24	100		µg/L	100	5/17/2018 3:39:00 PM	R51363
1,2,4-Trimethylbenzene	4.7	1.1	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.87	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Naphthalene	16	1.1	20	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
1-Methylnaphthalene	53	1.6	40		µg/L	10	5/17/2018 4:03:00 PM	R51363
2-Methylnaphthalene	4.5	1.5	40	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
Acetone	ND	8.2	100		µg/L	10	5/17/2018 4:03:00 PM	R51363
Bromobenzene	ND	1.4	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Bromodichloromethane	ND	1.8	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Bromoform	ND	2.1	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Bromomethane	ND	2.6	30		µg/L	10	5/17/2018 4:03:00 PM	R51363
2-Butanone	ND	11	100		µg/L	10	5/17/2018 4:03:00 PM	R51363
Carbon disulfide	ND	4.0	100		µg/L	10	5/17/2018 4:03:00 PM	R51363
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Chlorobenzene	ND	1.1	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Chloroethane	ND	2.3	20		µg/L	10	5/17/2018 4:03:00 PM	R51363
Chloroform	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Chloromethane	ND	2.9	30		µg/L	10	5/17/2018 4:03:00 PM	R51363
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
cis-1,2-DCE	9.4	2.0	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/17/2018 4:03:00 PM	R51363
Dibromochloromethane	ND	0.72	10		µg/L	10	5/17/2018 4:03:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.91	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1-Dichloroethane	ND	4.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1-Dichloroethene	8.2	0.81	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
2-Hexanone	ND	6.6	100		µg/L	10	5/17/2018 4:03:00 PM	R51363
Isopropylbenzene	8.5	0.51	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
4-Isopropyltoluene	2.0	0.96	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
4-Methyl-2-pentanone	ND	7.1	100		µg/L	10	5/17/2018 4:03:00 PM	R51363
Methylene Chloride	ND	1.1	30		µg/L	10	5/17/2018 4:03:00 PM	R51363
n-Butylbenzene	8.6	1.3	30	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
n-Propylbenzene	18	0.74	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
sec-Butylbenzene	4.8	1.1	10	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
Styrene	ND	1.6	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/17/2018 4:03:00 PM	R51363
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/17/2018 4:03:00 PM	R51363
Vinyl chloride	ND	1.8	10		µg/L	10	5/17/2018 4:03:00 PM	R51363
Xylenes, Total	14	3.2	15	J	µg/L	10	5/17/2018 4:03:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	10	5/17/2018 4:03:00 PM	R51363
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	10	5/17/2018 4:03:00 PM	R51363
Surr: Dibromofluoromethane	110	0	70-130		%Rec	10	5/17/2018 4:03:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 10:30:00 AM
Lab ID: 1805682-004 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	109	0	70-130		%Rec	10	5/17/2018 4:03:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	11	0.097	0.50		mg/L	10	5/14/2018 6:44:17 PM	A51264
Surr: BFB	104	0	70-130		%Rec	10	5/14/2018 6:44:17 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 8:59:34 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 8:59:34 PM	38098
Surr: DNOP	102	0	76.7-135		%Rec	1	5/16/2018 8:59:34 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/11/2018 6:56:25 PM	R51220
Chloride	0.31	0.029	0.50	J	mg/L	1	5/11/2018 6:56:25 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 6:56:25 PM	R51220
Bromide	ND	0.027	0.10		mg/L	1	5/11/2018 6:56:25 PM	R51220
Nitrogen, Nitrate (As N)	0.026	0.0066	0.10	J	mg/L	1	5/11/2018 6:56:25 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 6:56:25 PM	R51220
Sulfate	0.43	0.21	0.50	J	mg/L	1	5/11/2018 6:56:25 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/24/2018 10:02:12 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:02:12 PM	C51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 7:38:14 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:02:12 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:02:12 PM	C51516
Iron	ND	0.016	0.020		mg/L	1	6/1/2018 5:13:39 PM	A51676
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 10:02:12 PM	C51516
Manganese	0.00059	0.00039	0.0020	J	mg/L	1	5/31/2018 7:38:14 PM	C51646
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 10:02:12 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:02:12 PM	C51516
Sodium	0.44	0.16	1.0	J	mg/L	1	5/24/2018 10:02:12 PM	C51516
Zinc	0.0083	0.0021	0.010	J	mg/L	1	5/31/2018 7:38:14 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	5/29/2018 8:37:36 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:37:36 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:37:36 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:37:36 PM	38326
Iron	0.012	0.010	0.020	J	mg/L	1	5/29/2018 8:37:36 PM	38326
Manganese	ND	0.0011	0.0020		mg/L	1	5/29/2018 8:37:36 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:37:36 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:37:36 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 6:15:19 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:32:06 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:32:06 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:52:00 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	6/5/2018 4:01:19 PM	38326
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 4:01:19 PM	38326
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 4:01:19 PM	38326
Uranium	ND	0.000068	0.00050		mg/L	1	6/5/2018 4:01:19 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000060	0.000037	0.00020	J	mg/L	1	6/1/2018 1:51:41 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Benzoic acid	13	6.3	20	J	µg/L	1	5/23/2018 12:26:46 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 12:26:46 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 12:26:46 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 12:26:46 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 12:26:46 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 12:26:46 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 12:26:46 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 12:26:46 PM	38139
Surr: 2-Fluorophenol	37.6	0	15-114		%Rec	1	5/23/2018 12:26:46 PM	38139
Surr: Phenol-d5	27.6	0	15-97.9		%Rec	1	5/23/2018 12:26:46 PM	38139
Surr: 2,4,6-Tribromophenol	74.5	0	15-161		%Rec	1	5/23/2018 12:26:46 PM	38139
Surr: Nitrobenzene-d5	57.4	0	29.3-120		%Rec	1	5/23/2018 12:26:46 PM	38139
Surr: 2-Fluorobiphenyl	63.2	0	17.5-116		%Rec	1	5/23/2018 12:26:46 PM	38139
Surr: 4-Terphenyl-d14	55.4	0	21-92.2		%Rec	1	5/23/2018 12:26:46 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.33	0.062	1.0	J	µg/L	1	5/17/2018 4:27:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 4:27:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 4:27:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 4:27:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 4:27:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 4:27:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 4:27:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 4:27:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	5/17/2018 4:27:00 PM	R51363
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/17/2018 4:27:00 PM	R51363
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	5/17/2018 4:27:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:00:00 AM
Lab ID: 1805682-005
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/17/2018 4:27:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 7:07:19 PM	A51264
Surr: BFB	104	0	70-130		%Rec	1	5/14/2018 7:07:19 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	30	0.63	1.0		mg/L	1	5/16/2018 9:21:46 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 9:21:46 PM	38098
Surr: DNOP	104	0	76.7-135		%Rec	1	5/16/2018 9:21:46 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.29	0.15	0.50	J	mg/L	5	5/11/2018 7:46:02 PM	R51220
Chloride	190	0.59	10		mg/L	20	5/11/2018 7:58:26 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/11/2018 7:46:02 PM	R51220
Bromide	1.2	0.13	0.50		mg/L	5	5/11/2018 7:46:02 PM	R51220
Nitrogen, Nitrate (As N)	0.21	0.033	0.50	J	mg/L	5	5/11/2018 7:46:02 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/11/2018 7:46:02 PM	R51220
Sulfate	1.2	1.0	2.5	J	mg/L	5	5/11/2018 7:46:02 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	5.7	0.0099	0.020	*	mg/L	10	5/25/2018 12:51:37 AM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:04:22 PM	C51516
Calcium	230	0.39	5.0		mg/L	5	5/31/2018 7:40:23 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:04:22 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:04:22 PM	C51516
Iron	14	0.33	0.40	*	mg/L	20	6/1/2018 5:15:49 PM	A51676
Magnesium	39	0.25	1.0		mg/L	1	5/24/2018 10:04:22 PM	C51516
Manganese	4.6	0.0020	0.010	*	mg/L	5	5/31/2018 7:40:23 PM	C51646
Potassium	0.26	0.11	1.0	J	mg/L	1	5/24/2018 10:04:22 PM	C51516
Silver	0.0023	0.0018	0.0050	J	mg/L	1	5/24/2018 10:04:22 PM	C51516
Sodium	170	1.6	10		mg/L	10	5/31/2018 7:42:32 PM	C51646
Zinc	ND	0.011	0.050		mg/L	5	5/31/2018 7:40:23 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	5.7	0.010	0.020	*	mg/L	10	5/30/2018 4:53:35 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:40:00 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:40:00 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:40:00 PM	38326
Iron	17	0.51	1.0	*	mg/L	50	6/5/2018 3:20:09 PM	38448
Manganese	4.6	0.011	0.020	*	mg/L	10	5/30/2018 4:53:35 PM	38326
Silver	0.0038	0.0012	0.0050	J	mg/L	1	5/29/2018 8:40:00 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:40:00 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0031	0.00042	0.0010		mg/L	1	5/21/2018 6:17:41 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:34:25 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:34:25 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:53:11 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0027	0.00041	0.0010		mg/L	1	6/5/2018 4:05:05 PM	38326
Lead	0.00067	0.00023	0.00050		mg/L	1	6/5/2018 4:05:05 PM	38326
Selenium	0.0031	0.00098	0.0010		mg/L	1	6/5/2018 4:05:05 PM	38326
Uranium	0.00043	0.000068	0.00050	J	mg/L	1	6/5/2018 4:05:05 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000037	0.00020	J	mg/L	1	6/1/2018 1:53:52 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 12:54:23 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4-Dimethylphenol	14	5.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 12:54:23 PM	38139
1-Methylnaphthalene	74	7.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Methylnaphthalene	85	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 12:54:23 PM	38139
3+4-Methylphenol	6.0	5.4	10	J	µg/L	1	5/23/2018 12:54:23 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 12:54:23 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Naphthalene	120	5.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 12:54:23 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 12:54:23 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Phenol	30	6.0	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 12:54:23 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 12:54:23 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 12:54:23 PM	38139
Surr: 2-Fluorophenol	9.03	0	15-114	S	%Rec	1	5/23/2018 12:54:23 PM	38139
Surr: Phenol-d5	31.4	0	15-97.9		%Rec	1	5/23/2018 12:54:23 PM	38139
Surr: 2,4,6-Tribromophenol	70.2	0	15-161		%Rec	1	5/23/2018 12:54:23 PM	38139
Surr: Nitrobenzene-d5	63.0	0	29.3-120		%Rec	1	5/23/2018 12:54:23 PM	38139
Surr: 2-Fluorobiphenyl	57.1	0	17.5-116		%Rec	1	5/23/2018 12:54:23 PM	38139
Surr: 4-Terphenyl-d14	56.4	0	21-92.2		%Rec	1	5/23/2018 12:54:23 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	4800	3.1	50		µg/L	50	5/17/2018 4:51:00 PM	R51363
Toluene	150	0.32	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Ethylbenzene	870	4.7	50		µg/L	50	5/17/2018 4:51:00 PM	R51363
Methyl tert-butyl ether (MTBE)	2000	12	50		µg/L	50	5/17/2018 4:51:00 PM	R51363
1,2,4-Trimethylbenzene	690	5.6	50		µg/L	50	5/17/2018 4:51:00 PM	R51363
1,3,5-Trimethylbenzene	180	0.44	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.65	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Naphthalene	230	0.57	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
1-Methylnaphthalene	120	0.80	20		µg/L	5	5/17/2018 5:16:00 PM	R51363
2-Methylnaphthalene	140	0.76	20		µg/L	5	5/17/2018 5:16:00 PM	R51363
Acetone	37	4.1	50	J	µg/L	5	5/17/2018 5:16:00 PM	R51363
Bromobenzene	ND	0.70	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Bromodichloromethane	ND	0.88	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Bromoform	ND	1.1	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Bromomethane	ND	1.3	15		µg/L	5	5/17/2018 5:16:00 PM	R51363
2-Butanone	ND	5.7	50		µg/L	5	5/17/2018 5:16:00 PM	R51363
Carbon disulfide	ND	2.0	50		µg/L	5	5/17/2018 5:16:00 PM	R51363
Carbon Tetrachloride	ND	0.55	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Chlorobenzene	ND	0.53	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Chloroethane	ND	1.2	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
Chloroform	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Chloromethane	ND	1.5	15		µg/L	5	5/17/2018 5:16:00 PM	R51363
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
cis-1,2-DCE	ND	1.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.41	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	6.9	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
Dibromochloromethane	ND	0.36	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.45	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2-Dichlorobenzene	0.75	0.45	5.0	J	µg/L	5	5/17/2018 5:16:00 PM	R51363
1,3-Dichlorobenzene	ND	0.76	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1-Dichloroethene	2.5	0.40	5.0	J	µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2-Dichloropropane	ND	0.51	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,3-Dichloropropane	ND	0.84	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
2,2-Dichloropropane	ND	0.79	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1-Dichloropropene	ND	0.46	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
2-Hexanone	ND	3.3	50		µg/L	5	5/17/2018 5:16:00 PM	R51363
Isopropylbenzene	40	0.26	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
4-Isopropyltoluene	8.8	0.48	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
4-Methyl-2-pentanone	ND	3.5	50		µg/L	5	5/17/2018 5:16:00 PM	R51363
Methylene Chloride	ND	0.54	15		µg/L	5	5/17/2018 5:16:00 PM	R51363
n-Butylbenzene	13	0.65	15	J	µg/L	5	5/17/2018 5:16:00 PM	R51363
n-Propylbenzene	75	0.37	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
sec-Butylbenzene	8.9	0.55	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Styrene	ND	0.78	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
tert-Butylbenzene	ND	0.52	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.52	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.68	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.65	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
trans-1,3-Dichloropropene	ND	1.1	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.59	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.71	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1,1-Trichloroethane	ND	0.36	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,1,2-Trichloroethane	ND	0.70	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Trichloroethene (TCE)	ND	0.56	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Trichlorofluoromethane	ND	0.91	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
1,2,3-Trichloropropane	ND	1.9	10		µg/L	5	5/17/2018 5:16:00 PM	R51363
Vinyl chloride	ND	0.89	5.0		µg/L	5	5/17/2018 5:16:00 PM	R51363
Xylenes, Total	4000	16	75		µg/L	50	5/17/2018 4:51:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	5	5/17/2018 5:16:00 PM	R51363
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	5	5/17/2018 5:16:00 PM	R51363
Surr: Dibromofluoromethane	109	0	70-130		%Rec	5	5/17/2018 5:16:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018 11:35:00 AM
Lab ID: 1805682-006 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	112	0	70-130		%Rec	5	5/17/2018 5:16:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	28	0.048	0.25		mg/L	5	5/14/2018 7:30:18 PM	A51264
Surr: BFB	73.5	0	70-130		%Rec	5	5/14/2018 7:30:18 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.72	0.63	1.0	J	mg/L	1	5/16/2018 9:44:08 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 9:44:08 PM	38098
Surr: DNOP	104	0	76.7-135		%Rec	1	5/16/2018 9:44:08 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.16	0.030	0.10		mg/L	1	5/11/2018 8:10:51 PM	R51220
Chloride	97	0.59	10		mg/L	20	5/11/2018 8:23:16 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 8:10:51 PM	R51220
Bromide	0.56	0.027	0.10		mg/L	1	5/11/2018 8:10:51 PM	R51220
Nitrogen, Nitrate (As N)	0.13	0.0066	0.10		mg/L	1	5/11/2018 8:10:51 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 8:10:51 PM	R51220
Sulfate	200	4.1	10		mg/L	20	5/11/2018 8:23:16 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.044	0.00099	0.0020		mg/L	1	5/24/2018 10:06:22 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:06:22 PM	C51516
Calcium	74	0.39	5.0		mg/L	5	5/31/2018 7:44:41 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:06:22 PM	C51516
Copper	0.0033	0.0032	0.0060	J	mg/L	1	5/24/2018 10:06:22 PM	C51516
Iron	0.020	0.016	0.020		mg/L	1	6/1/2018 5:17:50 PM	A51676
Magnesium	16	0.25	1.0		mg/L	1	5/24/2018 10:06:22 PM	C51516
Manganese	0.16	0.0020	0.010	*	mg/L	5	5/31/2018 7:44:41 PM	C51646
Potassium	0.90	0.11	1.0	J	mg/L	1	5/24/2018 10:06:22 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:06:22 PM	C51516
Sodium	290	0.82	5.0		mg/L	5	5/31/2018 7:44:41 PM	C51646
Zinc	ND	0.011	0.050		mg/L	5	5/31/2018 7:44:41 PM	C51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.097	0.0010	0.0020		mg/L	1	5/29/2018 8:42:02 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:42:02 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:42:02 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:42:02 PM	38326
Iron	1.4	0.051	0.10	*	mg/L	5	6/5/2018 3:22:22 PM	38448
Manganese	0.23	0.0011	0.0020	*	mg/L	1	5/29/2018 8:42:02 PM	38326
Silver	0.0018	0.0012	0.0050	J	mg/L	1	5/29/2018 8:42:02 PM	38326
Zinc	0.0051	0.0033	0.010	J	mg/L	1	5/29/2018 8:42:02 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00074	0.00042	0.0010	J	mg/L	1	5/21/2018 6:20:05 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:36:44 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:36:44 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.034	0.00096	0.0050	*	mg/L	10	5/24/2018 5:54:23 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00060	0.00041	0.0010	J	mg/L	1	6/5/2018 4:16:10 PM	38326
Lead	0.0015	0.00023	0.00050		mg/L	1	6/5/2018 4:16:10 PM	38326
Selenium	0.00099	0.00098	0.0010	J	mg/L	1	6/5/2018 4:16:10 PM	38326
Uranium	0.035	0.00034	0.0025	*	mg/L	5	6/5/2018 4:23:32 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000071	0.000037	0.00020	J	mg/L	1	6/1/2018 1:56:03 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Benzoic acid	12	6.3	20	J	µg/L	1	5/23/2018 1:22:03 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 1:22:03 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 1:22:03 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 1:22:03 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 1:22:03 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 1:22:03 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 1:22:03 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 1:22:03 PM	38139
Surr: 2-Fluorophenol	45.0	0	15-114		%Rec	1	5/23/2018 1:22:03 PM	38139
Surr: Phenol-d5	37.6	0	15-97.9		%Rec	1	5/23/2018 1:22:03 PM	38139
Surr: 2,4,6-Tribromophenol	87.4	0	15-161		%Rec	1	5/23/2018 1:22:03 PM	38139
Surr: Nitrobenzene-d5	71.1	0	29.3-120		%Rec	1	5/23/2018 1:22:03 PM	38139
Surr: 2-Fluorobiphenyl	71.1	0	17.5-116		%Rec	1	5/23/2018 1:22:03 PM	38139
Surr: 4-Terphenyl-d14	65.2	0	21-92.2		%Rec	1	5/23/2018 1:22:03 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.28	0.062	1.0	J	µg/L	1	5/17/2018 6:04:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Methyl tert-butyl ether (MTBE)	560	2.4	10		µg/L	10	5/17/2018 5:40:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 6:04:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 6:04:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 6:04:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 6:04:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 6:04:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 6:04:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 6:04:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	99.4	0	70-130		%Rec	1	5/17/2018 6:04:00 PM	R51363
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/17/2018 6:04:00 PM	R51363
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	5/17/2018 6:04:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/10/2018
Lab ID: 1805682-007
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/17/2018 6:04:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	0.49	0.0097	0.050		mg/L	1	5/14/2018 7:53:28 PM	A51264
Surr: BFB	102	0	70-130		%Rec	1	5/14/2018 7:53:28 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805682-008
Matrix: TRIP BLANK
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 6:29:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 6:29:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 6:29:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805682-008
Matrix: TRIP BLANK
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 6:29:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 6:29:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 6:29:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 6:29:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	5/17/2018 6:29:00 PM	R51363
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	5/17/2018 6:29:00 PM	R51363
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	5/17/2018 6:29:00 PM	R51363
Surr: Toluene-d8	110	0	70-130		%Rec	1	5/17/2018 6:29:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 10:06:20 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 10:06:20 PM	38098
Surr: DNOP	104	0	76.7-135		%Rec	1	5/16/2018 10:06:20 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/11/2018 8:35:41 PM	R51220
Chloride	0.11	0.029	0.50	J	mg/L	1	5/11/2018 8:35:41 PM	R51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 8:35:41 PM	R51220
Bromide	ND	0.027	0.10		mg/L	1	5/11/2018 8:35:41 PM	R51220
Nitrogen, Nitrate (As N)	0.020	0.0066	0.10	J	mg/L	1	5/11/2018 8:35:41 PM	R51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 8:35:41 PM	R51220
Sulfate	ND	0.21	0.50		mg/L	1	5/11/2018 8:35:41 PM	R51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/24/2018 10:14:55 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:14:55 PM	C51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 7:46:48 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:14:55 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:14:55 PM	C51516
Iron	ND	0.016	0.020		mg/L	1	5/24/2018 10:14:55 PM	C51516
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 10:14:55 PM	C51516
Manganese	ND	0.00039	0.0020		mg/L	1	5/24/2018 10:14:55 PM	C51516
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 10:14:55 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:14:55 PM	C51516
Sodium	ND	0.16	1.0		mg/L	1	5/24/2018 10:14:55 PM	C51516
Zinc	0.0067	0.0021	0.010	J	mg/L	1	5/24/2018 10:14:55 PM	C51516
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	5/29/2018 8:43:59 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:43:59 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:43:59 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:43:59 PM	38326
Iron	ND	0.010	0.020		mg/L	1	5/29/2018 8:43:59 PM	38326
Manganese	ND	0.0011	0.0020		mg/L	1	5/29/2018 8:43:59 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:43:59 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:43:59 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 6:22:30 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	5/24/2018 3:41:23 PM	B51518
Selenium	ND	0.0038	0.0050		mg/L	5	5/24/2018 3:41:23 PM	B51518

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:55:34 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	6/5/2018 4:19:51 PM	38326
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 4:19:51 PM	38326
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 4:19:51 PM	38326
Uranium	ND	0.000068	0.00050		mg/L	1	6/5/2018 4:19:51 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000063	0.000037	0.00020	J	mg/L	1	6/1/2018 1:58:16 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Aniline	ND	6.2	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 1:49:41 PM	38139
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 1:49:41 PM	38139
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 1:49:41 PM	38139
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 1:49:41 PM	38139
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 1:49:41 PM	38139
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 1:49:41 PM	38139
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Phenol	ND	6.0	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 1:49:41 PM	38139
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 1:49:41 PM	38139
Surr: 2-Fluorophenol	44.2	0	15-114		%Rec	1	5/23/2018 1:49:41 PM	38139
Surr: Phenol-d5	33.1	0	15-97.9		%Rec	1	5/23/2018 1:49:41 PM	38139
Surr: 2,4,6-Tribromophenol	81.8	0	15-161		%Rec	1	5/23/2018 1:49:41 PM	38139
Surr: Nitrobenzene-d5	70.4	0	29.3-120		%Rec	1	5/23/2018 1:49:41 PM	38139
Surr: 2-Fluorobiphenyl	67.8	0	17.5-116		%Rec	1	5/23/2018 1:49:41 PM	38139
Surr: 4-Terphenyl-d14	62.4	0	21-92.2		%Rec	1	5/23/2018 1:49:41 PM	38139
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Toluene	0.082	0.064	1.0	J	µg/L	1	5/17/2018 6:53:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 6:53:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 6:53:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 6:53:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 6:53:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 6:53:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 6:53:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 6:53:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	97.2	0	70-130		%Rec	1	5/17/2018 6:53:00 PM	R51363
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/17/2018 6:53:00 PM	R51363
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/17/2018 6:53:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 7:40:00 AM
Lab ID: 1805682-009
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	108	0	70-130		%Rec	1	5/17/2018 6:53:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 10:35:06 PM	A51264
Surr: BFB	102	0	70-130		%Rec	1	5/14/2018 10:35:06 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/16/2018 10:28:46 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 10:28:46 PM	38098
Surr: DNOP	105	0	76.7-135		%Rec	1	5/16/2018 10:28:46 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/11/2018 9:25:18 PM	A51220
Chloride	0.15	0.029	0.50	J	mg/L	1	5/11/2018 9:25:18 PM	A51220
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	5/11/2018 9:25:18 PM	A51220
Bromide	ND	0.027	0.10		mg/L	1	5/11/2018 9:25:18 PM	A51220
Nitrogen, Nitrate (As N)	0.024	0.0066	0.10	J	mg/L	1	5/11/2018 9:25:18 PM	A51220
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	5/11/2018 9:25:18 PM	A51220
Sulfate	ND	0.21	0.50		mg/L	1	5/11/2018 9:25:18 PM	A51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/24/2018 10:17:06 PM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:17:06 PM	C51516
Calcium	ND	0.078	1.0		mg/L	1	5/31/2018 7:57:10 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:17:06 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:17:06 PM	C51516
Iron	ND	0.016	0.020		mg/L	1	5/24/2018 10:17:06 PM	C51516
Magnesium	ND	0.25	1.0		mg/L	1	5/24/2018 10:17:06 PM	C51516
Manganese	0.00041	0.00039	0.0020	J	mg/L	1	5/24/2018 10:17:06 PM	C51516
Potassium	ND	0.11	1.0		mg/L	1	5/24/2018 10:17:06 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:17:06 PM	C51516
Sodium	0.25	0.16	1.0	J	mg/L	1	5/24/2018 10:17:06 PM	C51516
Zinc	0.0088	0.0021	0.010	J	mg/L	1	5/24/2018 10:17:06 PM	C51516
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	5/29/2018 8:46:25 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:46:25 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:46:25 PM	38326
Copper	ND	0.0041	0.0060		mg/L	1	5/29/2018 8:46:25 PM	38326
Iron	ND	0.010	0.020		mg/L	1	5/29/2018 8:46:25 PM	38326
Manganese	ND	0.0011	0.0020		mg/L	1	5/29/2018 8:46:25 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:46:25 PM	38326
Zinc	ND	0.0033	0.010		mg/L	1	5/29/2018 8:46:25 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 6:24:53 PM	C51420
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 2:46:52 PM	B51888
Selenium	ND	0.0038	0.0050		mg/L	5	6/11/2018 2:46:52 PM	B51888

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	ND	0.00096	0.0050		mg/L	10	5/24/2018 5:56:45 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	6/5/2018 4:27:15 PM	38326
Lead	ND	0.00023	0.00050		mg/L	1	6/5/2018 4:27:15 PM	38326
Selenium	ND	0.00098	0.0010		mg/L	1	6/5/2018 4:27:15 PM	38326
Uranium	ND	0.000068	0.00050		mg/L	1	6/5/2018 4:27:15 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000058	0.000037	0.00020	J	mg/L	1	6/1/2018 2:00:28 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 3:13:01 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 3:13:01 PM	38192
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 3:13:01 PM	38192
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 3:13:01 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 3:13:01 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 3:13:01 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Phenol	ND	6.0	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 3:13:01 PM	38192
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 3:13:01 PM	38192
Surr: 2-Fluorophenol	48.4	0	15-114		%Rec	1	5/23/2018 3:13:01 PM	38192
Surr: Phenol-d5	37.3	0	15-97.9		%Rec	1	5/23/2018 3:13:01 PM	38192
Surr: 2,4,6-Tribromophenol	80.3	0	15-161		%Rec	1	5/23/2018 3:13:01 PM	38192
Surr: Nitrobenzene-d5	74.0	0	29.3-120		%Rec	1	5/23/2018 3:13:01 PM	38192
Surr: 2-Fluorobiphenyl	73.2	0	17.5-116		%Rec	1	5/23/2018 3:13:01 PM	38192
Surr: 4-Terphenyl-d14	87.0	0	21-92.2		%Rec	1	5/23/2018 3:13:01 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.062	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Toluene	ND	0.064	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Naphthalene	ND	0.11	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Acetone	ND	0.82	10		µg/L	1	5/17/2018 7:17:00 PM	R51363
Bromobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Bromoform	ND	0.21	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Bromomethane	ND	0.26	3.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
2-Butanone	ND	1.1	10		µg/L	1	5/17/2018 7:17:00 PM	R51363
Carbon disulfide	ND	0.40	10		µg/L	1	5/17/2018 7:17:00 PM	R51363
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Chloroethane	ND	0.23	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Chloroform	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Chloromethane	ND	0.29	3.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.091	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
2-Hexanone	ND	0.66	10		µg/L	1	5/17/2018 7:17:00 PM	R51363
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/17/2018 7:17:00 PM	R51363
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Styrene	ND	0.16	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/17/2018 7:17:00 PM	R51363
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/17/2018 7:17:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	5/17/2018 7:17:00 PM	R51363
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	5/17/2018 7:17:00 PM	R51363
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	5/17/2018 7:17:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:00:00 AM
Lab ID: 1805682-010
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	111	0	70-130		%Rec	1	5/17/2018 7:17:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/14/2018 10:58:12 PM	A51264
Surr: BFB	104	0	70-130		%Rec	1	5/14/2018 10:58:12 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	3.6	0.63	1.0		mg/L	1	5/16/2018 10:51:01 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 10:51:01 PM	38098
Surr: DNOP	102	0	76.7-135		%Rec	1	5/16/2018 10:51:01 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	5/11/2018 10:14:55 PM	A51220
Chloride	190	0.59	10		mg/L	20	5/11/2018 10:27:20 PM	A51220
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	5/11/2018 10:14:55 PM	A51220
Bromide	2.4	0.13	0.50		mg/L	5	5/11/2018 10:14:55 PM	A51220
Nitrogen, Nitrate (As N)	0.12	0.033	0.50	J	mg/L	5	5/11/2018 10:14:55 PM	A51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/11/2018 10:14:55 PM	A51220
Sulfate	4.3	1.0	2.5		mg/L	5	5/11/2018 10:14:55 PM	A51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.8	0.0099	0.020	*	mg/L	10	5/25/2018 1:00:18 AM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:19:16 PM	C51516
Calcium	220	0.78	10		mg/L	10	6/1/2018 5:19:56 PM	A51676
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:19:16 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:19:16 PM	C51516
Iron	31	0.82	1.0	*	mg/L	50	6/1/2018 5:28:22 PM	A51676
Magnesium	37	0.25	1.0		mg/L	1	5/24/2018 10:19:16 PM	C51516
Manganese	5.8	0.0039	0.020	*	mg/L	10	5/31/2018 8:01:27 PM	C51646
Potassium	14	0.11	1.0		mg/L	1	5/24/2018 10:19:16 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:19:16 PM	C51516
Sodium	150	1.6	10		mg/L	10	6/1/2018 5:19:56 PM	A51676
Zinc	0.018	0.0021	0.010		mg/L	1	5/24/2018 10:19:16 PM	C51516
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	4.0	0.010	0.020	*	mg/L	10	5/30/2018 5:00:13 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 8:48:47 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/29/2018 8:48:47 PM	38326
Copper	0.013	0.0041	0.0060		mg/L	1	5/29/2018 8:48:47 PM	38326
Iron	43	1.0	2.0	*	mg/L	100	6/5/2018 3:24:38 PM	38448
Manganese	5.9	0.011	0.020	*	mg/L	10	5/30/2018 5:00:13 PM	38326
Silver	ND	0.0012	0.0050		mg/L	1	5/29/2018 8:48:47 PM	38326
Zinc	0.11	0.0033	0.010		mg/L	1	5/29/2018 8:48:47 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.022	0.0021	0.0050	*	mg/L	5	6/11/2018 3:44:41 PM	B51888
Lead	0.00035	0.00017	0.00050	J	mg/L	1	6/11/2018 3:54:20 PM	B51888
Selenium	0.0071	0.0038	0.0050		mg/L	5	6/11/2018 3:44:41 PM	B51888

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0026	0.00096	0.0050	J	mg/L	10	5/24/2018 5:57:56 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.022	0.00041	0.0010	*	mg/L	1	6/5/2018 4:45:45 PM	38326
Lead	0.0023	0.00023	0.00050		mg/L	1	6/5/2018 4:45:45 PM	38326
Selenium	0.0057	0.00098	0.0010		mg/L	1	6/5/2018 4:45:45 PM	38326
Uranium	0.0038	0.000068	0.00050		mg/L	1	6/5/2018 4:45:45 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000041	0.000037	0.00020	J	mg/L	1	6/1/2018 2:02:42 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Acenaphthylene	ND	62	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Aniline	ND	62	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Anthracene	ND	57	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Azobenzene	ND	67	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benz(a)anthracene	ND	53	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzo(a)pyrene	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzo(b)fluoranthene	ND	71	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzo(k)fluoranthene	ND	64	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzoic acid	160	63	200	JD	µg/L	1	5/23/2018 3:40:43 PM	38192
Benzyl alcohol	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Butyl benzyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Carbazole	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Chloroaniline	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Chloronaphthalene	ND	61	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Chlorophenol	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Chrysene	ND	68	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Di-n-butyl phthalate	ND	68	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Di-n-octyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Dibenzofuran	ND	69	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
1,3-Dichlorobenzene	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
1,4-Dichlorobenzene	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Diethyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Dimethyl phthalate	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4-Dichlorophenol	ND	58	200	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4-Dimethylphenol	ND	59	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4-Dinitrophenol	ND	37	200	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4-Dinitrotoluene	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,6-Dinitrotoluene	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Fluoranthene	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Fluorene	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Hexachlorobenzene	ND	62	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Hexachlorobutadiene	ND	64	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Hexachloroethane	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Isophorone	ND	62	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
1-Methylnaphthalene	ND	70	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Methylnaphthalene	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Methylphenol	ND	63	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
3+4-Methylphenol	71	54	100	JD	µg/L	1	5/23/2018 3:40:43 PM	38192
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
N-Nitrosodimethylamine	ND	69	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Naphthalene	ND	50	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Nitroaniline	ND	59	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
3-Nitroaniline	ND	68	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Nitroaniline	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Nitrobenzene	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2-Nitrophenol	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
4-Nitrophenol	ND	56	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Pentachlorophenol	ND	53	200	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Phenanthrene	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Phenol	ND	60	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Pyrene	ND	65	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Pyridine	ND	54	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	1	5/23/2018 3:40:43 PM	38192
Surr: 2-Fluorophenol	36.5	0	15-114	D	%Rec	1	5/23/2018 3:40:43 PM	38192
Surr: Phenol-d5	26.9	0	15-97.9	D	%Rec	1	5/23/2018 3:40:43 PM	38192
Surr: 2,4,6-Tribromophenol	71.2	0	15-161	D	%Rec	1	5/23/2018 3:40:43 PM	38192
Surr: Nitrobenzene-d5	72.3	0	29.3-120	D	%Rec	1	5/23/2018 3:40:43 PM	38192
Surr: 2-Fluorobiphenyl	70.8	0	17.5-116	D	%Rec	1	5/23/2018 3:40:43 PM	38192
Surr: 4-Terphenyl-d14	86.7	0	21-92.2	D	%Rec	1	5/23/2018 3:40:43 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	4800	6.2	100		µg/L	100	5/17/2018 7:41:00 PM	R51363
Toluene	7.4	0.64	10	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
Ethylbenzene	470	0.93	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Methyl tert-butyl ether (MTBE)	520	2.4	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2,4-Trimethylbenzene	310	1.1	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,3,5-Trimethylbenzene	62	0.87	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	1.3	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Naphthalene	57	1.1	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
1-Methylnaphthalene	11	1.6	40	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
2-Methylnaphthalene	11	1.5	40	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
Acetone	ND	8.2	100		µg/L	10	5/17/2018 8:05:00 PM	R51363
Bromobenzene	ND	1.4	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Bromodichloromethane	ND	1.8	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Bromoform	ND	2.1	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Bromomethane	ND	2.6	30		µg/L	10	5/17/2018 8:05:00 PM	R51363
2-Butanone	48	11	100	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
Carbon disulfide	ND	4.0	100		µg/L	10	5/17/2018 8:05:00 PM	R51363
Carbon Tetrachloride	ND	1.1	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Chlorobenzene	ND	1.1	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Chloroethane	ND	2.3	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
Chloroform	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Chloromethane	ND	2.9	30		µg/L	10	5/17/2018 8:05:00 PM	R51363
2-Chlorotoluene	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
4-Chlorotoluene	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
cis-1,2-DCE	ND	2.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
cis-1,3-Dichloropropene	ND	0.82	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	14	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
Dibromochloromethane	ND	0.72	10		µg/L	10	5/17/2018 8:05:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	0.91	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2-Dichlorobenzene	ND	0.90	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,3-Dichlorobenzene	ND	1.5	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Dichlorodifluoromethane	ND	10	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1-Dichloroethane	ND	4.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1-Dichloroethene	ND	0.81	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2-Dichloropropane	ND	1.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,3-Dichloropropane	ND	1.7	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
2,2-Dichloropropane	ND	1.6	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1-Dichloropropene	ND	0.93	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Hexachlorobutadiene	ND	8.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
2-Hexanone	ND	6.6	100		µg/L	10	5/17/2018 8:05:00 PM	R51363
Isopropylbenzene	11	0.51	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
4-Isopropyltoluene	ND	0.96	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
4-Methyl-2-pentanone	14	7.1	100	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
Methylene Chloride	ND	1.1	30		µg/L	10	5/17/2018 8:05:00 PM	R51363
n-Butylbenzene	2.2	1.3	30	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
n-Propylbenzene	21	0.74	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
sec-Butylbenzene	1.3	1.1	10	J	µg/L	10	5/17/2018 8:05:00 PM	R51363
Styrene	ND	1.6	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
tert-Butylbenzene	ND	1.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	1.0	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	1.4	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
Tetrachloroethene (PCE)	ND	1.3	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
trans-1,2-DCE	ND	1.8	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
trans-1,3-Dichloropropene	ND	2.2	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2,3-Trichlorobenzene	ND	1.2	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2,4-Trichlorobenzene	ND	1.4	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1,1-Trichloroethane	ND	0.73	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,1,2-Trichloroethane	ND	1.4	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Trichloroethene (TCE)	ND	1.1	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Trichlorofluoromethane	ND	1.8	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
1,2,3-Trichloropropane	ND	3.9	20		µg/L	10	5/17/2018 8:05:00 PM	R51363
Vinyl chloride	ND	1.8	10		µg/L	10	5/17/2018 8:05:00 PM	R51363
Xylenes, Total	670	3.2	15		µg/L	10	5/17/2018 8:05:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	10	5/17/2018 8:05:00 PM	R51363
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	10	5/17/2018 8:05:00 PM	R51363
Surr: Dibromofluoromethane	108	0	70-130		%Rec	10	5/17/2018 8:05:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 8:40:00 AM
Lab ID: 1805682-011 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	10	5/17/2018 8:05:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	17	0.48	2.5		mg/L	50	5/14/2018 11:21:16 PM	A51264
Surr: BFB	92.0	0	70-130		%Rec	50	5/14/2018 11:21:16 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	9.7	0.63	1.0		mg/L	1	5/16/2018 11:13:18 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 11:13:18 PM	38098
Surr: DNOP	106	0	76.7-135		%Rec	1	5/16/2018 11:13:18 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.4	0.15	0.50		mg/L	5	5/11/2018 10:39:45 PM	A51220
Chloride	1600	2.9	50		mg/L	100	5/25/2018 11:46:52 AM	R51551
Nitrogen, Nitrite (As N)	0.63	0.24	0.50		mg/L	5	5/11/2018 10:39:45 PM	A51220
Bromide	3.7	0.13	0.50		mg/L	5	5/11/2018 10:39:45 PM	A51220
Nitrogen, Nitrate (As N)	0.097	0.033	0.50	J	mg/L	5	5/11/2018 10:39:45 PM	A51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/11/2018 10:39:45 PM	A51220
Sulfate	18	1.0	2.5		mg/L	5	5/11/2018 10:39:45 PM	A51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	8.8	0.0099	0.020	*	mg/L	10	5/25/2018 1:02:15 AM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:21:15 PM	C51516
Calcium	320	0.78	10		mg/L	10	5/31/2018 8:05:22 PM	C51646
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:21:15 PM	C51516
Copper	0.014	0.0032	0.0060		mg/L	1	5/24/2018 10:21:15 PM	C51516
Iron	17	0.33	0.40	*	mg/L	20	6/1/2018 5:30:18 PM	A51676
Magnesium	79	0.25	1.0		mg/L	1	5/24/2018 10:21:15 PM	C51516
Manganese	5.4	0.0039	0.020	*	mg/L	10	5/31/2018 8:05:22 PM	C51646
Potassium	7.5	0.11	1.0		mg/L	1	5/24/2018 10:21:15 PM	C51516
Silver	0.0038	0.0018	0.0050	J	mg/L	1	5/24/2018 10:21:15 PM	C51516
Sodium	740	1.6	10		mg/L	10	5/31/2018 8:05:22 PM	C51646
Zinc	0.022	0.0021	0.010		mg/L	1	5/24/2018 10:21:15 PM	C51516
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	9.0	0.010	0.020	*	mg/L	10	5/30/2018 5:04:23 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 9:01:28 PM	38326
Chromium	ND	0.0018	0.0060		mg/L	1	5/30/2018 5:06:36 PM	38326
Copper	0.027	0.0041	0.0060		mg/L	1	5/29/2018 9:01:28 PM	38326
Iron	16	0.51	1.0	*	mg/L	50	6/5/2018 3:33:18 PM	38448
Manganese	5.5	0.011	0.020	*	mg/L	10	5/30/2018 5:04:23 PM	38326
Silver	0.0057	0.0012	0.0050		mg/L	1	5/29/2018 9:01:28 PM	38326
Zinc	0.023	0.0033	0.010		mg/L	1	5/30/2018 5:06:36 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.023	0.00042	0.0010	*	mg/L	1	6/11/2018 3:35:02 PM	B51888
Lead	0.0043	0.00017	0.00050		mg/L	1	6/11/2018 3:35:02 PM	B51888
Selenium	0.010	0.0038	0.0050		mg/L	5	6/11/2018 3:30:13 PM	B51888

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0037	0.00096	0.0050	J	mg/L	10	5/24/2018 6:01:35 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.028	0.0021	0.0050	*	mg/L	5	6/5/2018 5:07:55 PM	38326
Lead	0.0088	0.0011	0.0025		mg/L	5	6/5/2018 5:07:55 PM	38326
Selenium	0.012	0.0049	0.0050		mg/L	5	6/5/2018 5:07:55 PM	38326
Uranium	0.0052	0.00034	0.0025		mg/L	5	6/5/2018 5:07:55 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	6/1/2018 2:09:32 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Acenaphthylene	ND	62	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Aniline	ND	62	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Anthracene	ND	57	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Azobenzene	ND	67	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benz(a)anthracene	ND	53	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzo(a)pyrene	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzo(b)fluoranthene	ND	71	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzo(k)fluoranthene	ND	64	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzoic acid	160	63	200	JD	µg/L	1	5/23/2018 4:08:27 PM	38192
Benzyl alcohol	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Butyl benzyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Carbazole	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Chloroaniline	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Chloronaphthalene	ND	61	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Chlorophenol	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Chrysene	ND	68	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Di-n-butyl phthalate	ND	68	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Di-n-octyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Dibenzofuran	ND	69	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
1,3-Dichlorobenzene	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
1,4-Dichlorobenzene	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Diethyl phthalate	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Dimethyl phthalate	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4-Dichlorophenol	ND	58	200	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4-Dimethylphenol	240	59	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4-Dinitrophenol	ND	37	200	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4-Dinitrotoluene	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,6-Dinitrotoluene	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Fluoranthene	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Fluorene	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Hexachlorobenzene	ND	62	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Hexachlorobutadiene	ND	64	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Hexachloroethane	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Isophorone	ND	62	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
1-Methylnaphthalene	ND	70	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Methylnaphthalene	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Methylphenol	ND	63	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
3+4-Methylphenol	54	54	100	JD	µg/L	1	5/23/2018 4:08:27 PM	38192
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
N-Nitrosodimethylamine	ND	69	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Naphthalene	150	50	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Nitroaniline	ND	59	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
3-Nitroaniline	ND	68	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Nitroaniline	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Nitrobenzene	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2-Nitrophenol	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
4-Nitrophenol	ND	56	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Pentachlorophenol	ND	53	200	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Phenanthrene	ND	60	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Phenol	73	60	100	JD	µg/L	1	5/23/2018 4:08:27 PM	38192
Pyrene	ND	65	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Pyridine	ND	54	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	1	5/23/2018 4:08:27 PM	38192
Surr: 2-Fluorophenol	21.4	0	15-114	D	%Rec	1	5/23/2018 4:08:27 PM	38192
Surr: Phenol-d5	22.4	0	15-97.9	D	%Rec	1	5/23/2018 4:08:27 PM	38192
Surr: 2,4,6-Tribromophenol	58.7	0	15-161	D	%Rec	1	5/23/2018 4:08:27 PM	38192
Surr: Nitrobenzene-d5	56.1	0	29.3-120	D	%Rec	1	5/23/2018 4:08:27 PM	38192
Surr: 2-Fluorobiphenyl	51.5	0	17.5-116	D	%Rec	1	5/23/2018 4:08:27 PM	38192
Surr: 4-Terphenyl-d14	67.5	0	21-92.2	D	%Rec	1	5/23/2018 4:08:27 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	13000	31	500		µg/L	500	5/17/2018 8:29:00 PM	R51363
Toluene	140	3.2	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Ethylbenzene	1300	4.7	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Methyl tert-butyl ether (MTBE)	130	12	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2,4-Trimethylbenzene	1600	5.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,3,5-Trimethylbenzene	470	4.4	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Naphthalene	330	5.7	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
1-Methylnaphthalene	53	8.0	200	J	µg/L	50	5/17/2018 8:53:00 PM	R51363
2-Methylnaphthalene	65	7.6	200	J	µg/L	50	5/17/2018 8:53:00 PM	R51363
Acetone	ND	41	500		µg/L	50	5/17/2018 8:53:00 PM	R51363
Bromobenzene	ND	7.0	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Bromodichloromethane	ND	8.8	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Bromoform	ND	11	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Bromomethane	ND	13	150		µg/L	50	5/17/2018 8:53:00 PM	R51363
2-Butanone	ND	57	500		µg/L	50	5/17/2018 8:53:00 PM	R51363
Carbon disulfide	ND	20	500		µg/L	50	5/17/2018 8:53:00 PM	R51363
Carbon Tetrachloride	ND	5.5	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Chlorobenzene	ND	5.3	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Chloroethane	ND	12	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
Chloroform	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Chloromethane	ND	15	150		µg/L	50	5/17/2018 8:53:00 PM	R51363
2-Chlorotoluene	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
4-Chlorotoluene	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
cis-1,2-DCE	ND	10	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
Dibromochloromethane	ND	3.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	4.5	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,4-Dichlorobenzene	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Dichlorodifluoromethane	ND	50	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1-Dichloroethane	ND	20	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1-Dichloroethene	ND	4.0	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2-Dichloropropane	ND	5.1	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,3-Dichloropropane	ND	8.4	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
2,2-Dichloropropane	ND	7.9	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1-Dichloropropene	ND	4.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Hexachlorobutadiene	ND	40	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
2-Hexanone	ND	33	500		µg/L	50	5/17/2018 8:53:00 PM	R51363
Isopropylbenzene	21	2.6	50	J	µg/L	50	5/17/2018 8:53:00 PM	R51363
4-Isopropyltoluene	ND	4.8	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
4-Methyl-2-pentanone	ND	35	500		µg/L	50	5/17/2018 8:53:00 PM	R51363
Methylene Chloride	ND	5.4	150		µg/L	50	5/17/2018 8:53:00 PM	R51363
n-Butylbenzene	15	6.5	150	J	µg/L	50	5/17/2018 8:53:00 PM	R51363
n-Propylbenzene	64	3.7	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
sec-Butylbenzene	7.5	5.5	50	J	µg/L	50	5/17/2018 8:53:00 PM	R51363
Styrene	ND	7.8	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
tert-Butylbenzene	ND	5.2	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
trans-1,2-DCE	ND	9.2	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Trichlorofluoromethane	ND	9.1	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
1,2,3-Trichloropropane	ND	19	100		µg/L	50	5/17/2018 8:53:00 PM	R51363
Vinyl chloride	ND	8.9	50		µg/L	50	5/17/2018 8:53:00 PM	R51363
Xylenes, Total	13000	16	75		µg/L	50	5/17/2018 8:53:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	50	5/17/2018 8:53:00 PM	R51363
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	50	5/17/2018 8:53:00 PM	R51363
Surr: Dibromofluoromethane	104	0	70-130		%Rec	50	5/17/2018 8:53:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 9:30:00 AM
Lab ID: 1805682-012 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	109	0	70-130		%Rec	50	5/17/2018 8:53:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	76	0.97	5.0		mg/L	100	5/14/2018 11:44:21 PM	A51264
Surr: BFB	87.9	0	70-130		%Rec	100	5/14/2018 11:44:21 PM	A51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.9	0.63	1.0		mg/L	1	5/16/2018 11:35:28 PM	38098
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/16/2018 11:35:28 PM	38098
Surr: DNOP	104	0	76.7-135		%Rec	1	5/16/2018 11:35:28 PM	38098
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.25	0.15	0.50	J	mg/L	5	5/11/2018 11:04:33 PM	A51220
Chloride	840	1.5	25		mg/L	50	5/25/2018 11:59:13 AM	R51551
Nitrogen, Nitrite (As N)	0.33	0.24	0.50	J	mg/L	5	5/11/2018 11:04:33 PM	A51220
Bromide	2.1	0.13	0.50		mg/L	5	5/11/2018 11:04:33 PM	A51220
Nitrogen, Nitrate (As N)	0.099	0.033	0.50	J	mg/L	5	5/11/2018 11:04:33 PM	A51220
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	5/11/2018 11:04:33 PM	A51220
Sulfate	1.2	1.0	2.5	J	mg/L	5	5/11/2018 11:04:33 PM	A51220
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.1	0.0099	0.020	*	mg/L	10	5/25/2018 1:04:27 AM	C51516
Cadmium	ND	0.0010	0.0020		mg/L	1	5/24/2018 10:23:16 PM	C51516
Calcium	88	0.39	5.0		mg/L	5	6/1/2018 5:32:21 PM	A51676
Chromium	ND	0.0013	0.0060		mg/L	1	5/24/2018 10:23:16 PM	C51516
Copper	ND	0.0032	0.0060		mg/L	1	5/24/2018 10:23:16 PM	C51516
Iron	3.4	0.082	0.10	*	mg/L	5	6/1/2018 5:32:21 PM	A51676
Magnesium	22	0.25	1.0		mg/L	1	5/24/2018 10:23:16 PM	C51516
Manganese	1.9	0.0020	0.010	*	mg/L	5	5/31/2018 8:09:43 PM	C51646
Potassium	1.4	0.11	1.0		mg/L	1	5/24/2018 10:23:16 PM	C51516
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 10:23:16 PM	C51516
Sodium	700	1.6	10		mg/L	10	6/1/2018 5:34:26 PM	A51676
Zinc	0.0088	0.0021	0.010	J	mg/L	1	5/24/2018 10:23:16 PM	C51516
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	2.3	0.0050	0.010	*	mg/L	5	5/30/2018 5:08:39 PM	38326
Cadmium	ND	0.00058	0.0020		mg/L	1	5/29/2018 9:03:30 PM	38326
Chromium	0.0031	0.0018	0.0060	J	mg/L	1	5/30/2018 7:30:08 PM	38326
Copper	0.0069	0.0041	0.0060		mg/L	1	5/29/2018 9:03:30 PM	38326
Iron	4.3	0.10	0.20	*	mg/L	10	6/11/2018 7:50:01 PM	38548
Manganese	1.9	0.0055	0.010	*	mg/L	5	5/30/2018 5:08:39 PM	38326
Silver	0.0015	0.0012	0.0050	J	mg/L	1	5/29/2018 9:03:30 PM	38326
Zinc	0.026	0.0033	0.010		mg/L	1	5/30/2018 7:30:08 PM	38326
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.010	0.0021	0.0050	*	mg/L	5	6/11/2018 3:01:28 PM	B51888
Lead	ND	0.00087	0.0025		mg/L	5	6/11/2018 3:01:28 PM	B51888
Selenium	ND	0.0076	0.010		mg/L	10	6/11/2018 2:56:30 PM	B51888

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.0067	0.00096	0.0050		mg/L	10	5/24/2018 6:02:47 PM	D51518
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	6/5/2018 4:53:07 PM	38326
Lead	0.0037	0.00023	0.00050		mg/L	1	6/5/2018 4:53:07 PM	38326
Selenium	0.0046	0.00098	0.0010		mg/L	1	6/5/2018 4:53:07 PM	38326
Uranium	0.0093	0.000068	0.00050		mg/L	1	6/5/2018 4:53:07 PM	38326
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000037	0.00020		mg/L	1	6/1/2018 2:11:46 PM	38431
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzoic acid	41	6.3	20		µg/L	1	5/23/2018 4:36:42 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4-Dimethylphenol	37	5.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 4:36:42 PM	38192
1-Methylnaphthalene	22	7.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Methylnaphthalene	16	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Methylphenol	12	6.3	10		µg/L	1	5/23/2018 4:36:42 PM	38192
3+4-Methylphenol	5.8	5.4	10	J	µg/L	1	5/23/2018 4:36:42 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 4:36:42 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Naphthalene	63	5.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 4:36:42 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 4:36:42 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Phenol	290	12	20		µg/L	2	6/7/2018 2:39:06 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 4:36:42 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 4:36:42 PM	38192
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 4:36:42 PM	38192
Surr: 2-Fluorophenol	16.1	0	15-114		%Rec	1	5/23/2018 4:36:42 PM	38192
Surr: Phenol-d5	30.7	0	15-97.9		%Rec	1	5/23/2018 4:36:42 PM	38192
Surr: 2,4,6-Tribromophenol	75.1	0	15-161		%Rec	1	5/23/2018 4:36:42 PM	38192
Surr: Nitrobenzene-d5	61.2	0	29.3-120		%Rec	1	5/23/2018 4:36:42 PM	38192
Surr: 2-Fluorobiphenyl	71.2	0	17.5-116		%Rec	1	5/23/2018 4:36:42 PM	38192
Surr: 4-Terphenyl-d14	81.8	0	21-92.2		%Rec	1	5/23/2018 4:36:42 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	19000	31	500		µg/L	500	5/17/2018 9:17:00 PM	R51363
Toluene	170	3.2	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Ethylbenzene	1600	4.7	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Methyl tert-butyl ether (MTBE)	640	12	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2,4-Trimethylbenzene	690	5.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,3,5-Trimethylbenzene	98	4.4	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2-Dibromoethane (EDB)	ND	6.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Naphthalene	140	5.7	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
1-Methylnaphthalene	40	8.0	200	J	µg/L	50	5/17/2018 9:41:00 PM	R51363
2-Methylnaphthalene	43	7.6	200	J	µg/L	50	5/17/2018 9:41:00 PM	R51363
Acetone	ND	41	500		µg/L	50	5/17/2018 9:41:00 PM	R51363
Bromobenzene	ND	7.0	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Bromodichloromethane	ND	8.8	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Bromoform	ND	11	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Bromomethane	ND	13	150		µg/L	50	5/17/2018 9:41:00 PM	R51363
2-Butanone	ND	57	500		µg/L	50	5/17/2018 9:41:00 PM	R51363
Carbon disulfide	ND	20	500		µg/L	50	5/17/2018 9:41:00 PM	R51363
Carbon Tetrachloride	ND	5.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Chlorobenzene	ND	5.3	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Chloroethane	ND	12	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
Chloroform	ND	20	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Chloromethane	ND	15	150		µg/L	50	5/17/2018 9:41:00 PM	R51363
2-Chlorotoluene	ND	20	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
4-Chlorotoluene	ND	20	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
cis-1,2-DCE	ND	10	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
cis-1,3-Dichloropropene	ND	4.1	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2-Dibromo-3-chloropropane	ND	69	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
Dibromochloromethane	ND	3.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013
Matrix: AQUEOUS
Received Date: 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	4.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2-Dichlorobenzene	ND	4.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,3-Dichlorobenzene	ND	7.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,4-Dichlorobenzene	ND	20	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Dichlorodifluoromethane	ND	50	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1-Dichloroethane	36	20	50	J	µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1-Dichloroethene	ND	4.0	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2-Dichloropropane	ND	5.1	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,3-Dichloropropane	ND	8.4	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
2,2-Dichloropropane	ND	7.9	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1-Dichloropropene	ND	4.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Hexachlorobutadiene	ND	40	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
2-Hexanone	ND	33	500		µg/L	50	5/17/2018 9:41:00 PM	R51363
Isopropylbenzene	30	2.6	50	J	µg/L	50	5/17/2018 9:41:00 PM	R51363
4-Isopropyltoluene	ND	4.8	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
4-Methyl-2-pentanone	ND	35	500		µg/L	50	5/17/2018 9:41:00 PM	R51363
Methylene Chloride	ND	5.4	150		µg/L	50	5/17/2018 9:41:00 PM	R51363
n-Butylbenzene	ND	6.5	150		µg/L	50	5/17/2018 9:41:00 PM	R51363
n-Propylbenzene	78	3.7	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
sec-Butylbenzene	ND	5.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Styrene	ND	7.8	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
tert-Butylbenzene	ND	5.2	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1,1,2-Tetrachloroethane	ND	5.2	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1,2,2-Tetrachloroethane	ND	6.8	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
Tetrachloroethene (PCE)	ND	6.5	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
trans-1,2-DCE	ND	9.2	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
trans-1,3-Dichloropropene	ND	11	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2,3-Trichlorobenzene	ND	5.9	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2,4-Trichlorobenzene	ND	7.1	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1,1-Trichloroethane	ND	3.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,1,2-Trichloroethane	ND	7.0	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Trichloroethene (TCE)	ND	5.6	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Trichlorofluoromethane	ND	9.1	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
1,2,3-Trichloropropane	ND	19	100		µg/L	50	5/17/2018 9:41:00 PM	R51363
Vinyl chloride	ND	8.9	50		µg/L	50	5/17/2018 9:41:00 PM	R51363
Xylenes, Total	2000	16	75		µg/L	50	5/17/2018 9:41:00 PM	R51363
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	50	5/17/2018 9:41:00 PM	R51363
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	50	5/17/2018 9:41:00 PM	R51363
Surr: Dibromofluoromethane	110	0	70-130		%Rec	50	5/17/2018 9:41:00 PM	R51363

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/11/2018 10:10:00 AM
Lab ID: 1805682-013 **Matrix:** AQUEOUS **Received Date:** 5/11/2018 2:29:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	110	0	70-130		%Rec	50	5/17/2018 9:41:00 PM	R51363
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	47	0.19	1.0		mg/L	20	5/15/2018 12:07:26 AM	B51264
Surr: BFB	87.4	0	70-130		%Rec	20	5/15/2018 12:07:26 AM	B51264

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679026** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0063	0.0060	0.006000	0	105	50	150			
Copper	0.0061	0.0060	0.006000	0	102	50	150			
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.50	1.0	0.5000	0	100	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J
Sodium	0.53	1.0	0.5000	0	107	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	92.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.5	85	115			
Chromium	0.47	0.0060	0.5000	0	94.2	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C51516**	RunNo:	**51516**					
Prep Date:		Analysis Date:	**5/24/2018**	SeqNo:	**1679027**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.48	0.0020	0.5000	0	95.6	85	115			
Potassium	50	1.0	50.00	0	101	85	115			
Silver	0.099	0.0050	0.1000	0	99.3	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	93.6	85	115			

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C51646**	RunNo:	**51646**					
Prep Date:		Analysis Date:	**5/31/2018**	SeqNo:	**1685202**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.18	1.0								J
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C51646**	RunNo:	**51646**					
Prep Date:		Analysis Date:	**5/31/2018**	SeqNo:	**1685203**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0066	0.0060	0.006000	0	109	50	150			
Iron	0.019	0.020	0.02000	0	94.6	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Sodium	0.57	1.0	0.5000	0	115	50	150			J
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C51646**	RunNo:	**51646**					
Prep Date:		Analysis Date:	**5/31/2018**	SeqNo:	**1685204**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	95.1	85	115			
Chromium	0.49	0.0060	0.5000	0	98.5	85	115			
Copper	0.48	0.0060	0.5000	0	96.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-C**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **C51646**		RunNo: **51646**						
Prep Date:		Analysis Date: **5/31/2018**		SeqNo: **1685204**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.51	0.020	0.5000	0	101	85	115			
Manganese		0.50	0.0020	0.5000	0	100	85	115			
Sodium		50	1.0	50.00	0	99.6	85	115			
Zinc		0.50	0.010	0.5000	0	101	85	115			

Sample ID	**MB-C**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **C51646**		RunNo: **51646**						
Prep Date:		Analysis Date: **5/31/2018**		SeqNo: **1685211**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Chromium		ND	0.0060								
Copper		ND	0.0060								
Iron		ND	0.020								
Manganese		ND	0.0020								
Sodium		0.17	1.0								J
Zinc		ND	0.010								

Sample ID	**MB-A**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **A51676**		RunNo: **51676**						
Prep Date:		Analysis Date: **6/1/2018**		SeqNo: **1685686**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Iron		ND	0.020								
Sodium		ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **A51676**		RunNo: **51676**						
Prep Date:		Analysis Date: **6/1/2018**		SeqNo: **1685687**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		0.55	1.0	0.5000	0	109	50	150			J
Iron		0.019	0.020	0.02000	0	96.6	50	150			J
Sodium		0.57	1.0	0.5000	0	114	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A51676**		RunNo:	**51676**				
Prep Date:		Analysis Date:	**6/1/2018**		SeqNo:	**1685688**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.9	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Sodium	50	1.0	50.00	0	101	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**A51787**		RunNo:	**51787**				
Prep Date:		Analysis Date:	**6/6/2018**		SeqNo:	**1690923**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A51787**		RunNo:	**51787**				
Prep Date:		Analysis Date:	**6/6/2018**		SeqNo:	**1690924**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.020	0.020	0.02000	0	102	50	150			

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A51787**		RunNo:	**51787**				
Prep Date:		Analysis Date:	**6/6/2018**		SeqNo:	**1690925**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805682-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB10**	Batch ID:	**38326**		RunNo:	**51590**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/29/2018**		SeqNo:	**1681974**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.4	70	130			
Cadmium	0.51	0.0020	0.5000	0	103	70	130			
Chromium	0.48	0.0060	0.5000	0	96.7	70	130			
Copper	0.47	0.0060	0.5000	0	93.5	70	130			
Iron	0.51	0.020	0.5000	0	103	70	130			
Manganese	0.47	0.0020	0.5000	0	94.5	70	130			
Silver	0.11	0.0050	0.1000	0	107	70	130			
Zinc	0.49	0.010	0.5000	0	98.1	70	130			

Sample ID	**1805682-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB10**	Batch ID:	**38326**		RunNo:	**51590**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/29/2018**		SeqNo:	**1681978**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.5	70	130	1.18	20	
Cadmium	0.51	0.0020	0.5000	0	101	70	130	1.11	20	
Chromium	0.48	0.0060	0.5000	0	96.9	70	130	0.205	20	
Copper	0.47	0.0060	0.5000	0	94.8	70	130	1.44	20	
Iron	0.52	0.020	0.5000	0	104	70	130	1.44	20	B
Manganese	0.48	0.0020	0.5000	0	95.3	70	130	0.824	20	
Silver	0.11	0.0050	0.1000	0	108	70	130	0.951	20	
Zinc	0.48	0.010	0.5000	0	96.9	70	130	1.19	20	

Sample ID	**MB-38326**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**38326**		RunNo:	**51590**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/29/2018**		SeqNo:	**1682083**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LLLCS-38326**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**38326**		RunNo:	**51590**					
Prep Date:	**5/25/2018**	Analysis Date:	**5/29/2018**		SeqNo:	**1682084**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.0020	0.0020	0.002000	0	102	50	150				
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J	
Chromium	0.0054	0.0060	0.006000	0	90.2	50	150			J	
Copper	0.0044	0.0060	0.006000	0	72.7	50	150			J	
Manganese	0.0021	0.0020	0.002000	0	104	50	150				
Silver	0.0047	0.0050	0.005000	0	93.4	50	150			J	
Zinc	0.0056	0.010	0.005000	0	112	50	150			J	

Sample ID	**LCS-38326**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**38326**		RunNo:	**51590**					
Prep Date:	**5/25/2018**	Analysis Date:	**5/29/2018**		SeqNo:	**1682085**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.48	0.0020	0.5000	0	96.9	85	115				
Cadmium	0.51	0.0020	0.5000	0	102	85	115				
Chromium	0.49	0.0060	0.5000	0	97.5	85	115				
Copper	0.48	0.0060	0.5000	0	95.4	85	115				
Manganese	0.47	0.0020	0.5000	0	94.9	85	115				
Silver	0.11	0.0050	0.1000	0	107	85	115				
Zinc	0.49	0.010	0.5000	0	97.5	85	115				

Sample ID	**MB-38448**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**38448**		RunNo:	**51699**					
Prep Date:	**6/1/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1687907**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	ND	0.020									

Sample ID	**LLLCS-38448**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**38448**		RunNo:	**51699**					
Prep Date:	**6/1/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1687908**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	0.019	0.020	0.02000	0	93.2	50	150			J	

Sample ID	**LCS-38448**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**38448**		RunNo:	**51699**					
Prep Date:	**6/1/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1687909**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-38448**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**38448**		RunNo:	**51699**				
Prep Date:	**6/1/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1687909**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.52	0.020	0.5000	0	104	85	115			

Sample ID	**MB-38548**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**38548**		RunNo:	**51873**				
Prep Date:	**6/7/2018**	Analysis Date:	**6/11/2018**		SeqNo:	**1695360**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-38548**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**38548**		RunNo:	**51873**				
Prep Date:	**6/7/2018**	Analysis Date:	**6/11/2018**		SeqNo:	**1695361**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.017	0.020	0.02000	0	86.0	50	150			J

Sample ID	**LCS-38548**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**38548**		RunNo:	**51873**				
Prep Date:	**6/7/2018**	Analysis Date:	**6/11/2018**		SeqNo:	**1695362**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.9	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.6	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678360** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678361** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00050	0.00050	0.0005000	0	99.6	50	150			J
Selenium	0.00088	0.0010	0.001000	0	87.7	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678362** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.00050	0.01250	0	95.0	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00054	0.00050	0.0005000	0	107	50	150			
Selenium	0.0011	0.0010	0.001000	0	106	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678400** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	105	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678470** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00046	0.00050	0.0005000	0	92.3	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D51518**	RunNo: **51518**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1678472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCSD**	SampType:	**LCSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSS02**	Batch ID:	**D51518**		RunNo:	**51518**				
Prep Date:		Analysis Date:	**5/24/2018**		SeqNo:	**1678473**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	91.6	85	115	2.24	20	

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B51888**		RunNo:	**51888**				
Prep Date:		Analysis Date:	**6/11/2018**		SeqNo:	**1695884**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**1805682-011EMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**MKTF-21**	Batch ID:	**B51888**		RunNo:	**51888**				
Prep Date:		Analysis Date:	**6/11/2018**		SeqNo:	**1695890**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.02192	86.9	70	130			
Selenium	0.10	0.0050	0.1250	0.007077	77.2	70	130			

Sample ID	**1805682-011EMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**MKTF-21**	Batch ID:	**B51888**		RunNo:	**51888**				
Prep Date:		Analysis Date:	**6/11/2018**		SeqNo:	**1695892**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0.0003458	103	70	130			

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B51888**		RunNo:	**51888**				
Prep Date:		Analysis Date:	**6/11/2018**		SeqNo:	**1695952**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.0	50	150			J
Selenium	0.0010	0.0010	0.001000	0	103	50	150			

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B51888**		RunNo:	**51888**				
Prep Date:		Analysis Date:	**6/11/2018**		SeqNo:	**1695954**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51888**	RunNo: **51888**
Prep Date:	Analysis Date: **6/11/2018**	SeqNo: **1695954** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.012	0.00050	0.01250	0	94.8	85	115			
Selenium	0.023	0.0010	0.02500	0	90.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MSLLLCS-38326**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**38326**		RunNo:	**51650**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/31/2018**		SeqNo:	**1684301**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00083	0.0010	0.001000	0	82.7	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			J

Sample ID	**MSLCS-38326**	SampType:	**LCS**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**LCSW**	Batch ID:	**38326**		RunNo:	**51650**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/31/2018**		SeqNo:	**1684302**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Sample ID	**MB-38326**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**38326**		RunNo:	**51650**				
Prep Date:	**5/25/2018**	Analysis Date:	**5/31/2018**		SeqNo:	**1684305**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MB-38326**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**38326**		RunNo:	**51690**				
Prep Date:	**5/25/2018**	Analysis Date:	**6/1/2018**		SeqNo:	**1686670**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID	**MSLLLCS-38326**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**38326**		RunNo:	**51690**				
Prep Date:	**5/25/2018**	Analysis Date:	**6/1/2018**		SeqNo:	**1686671**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00060	0.0010	0.001000	0	60.3	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**MSLCS-38326**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38326**	RunNo:	**51690**					
Prep Date:	**5/25/2018**	Analysis Date:	**6/1/2018**	SeqNo:	**1686672**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-38431**	SampType:	**LCS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38431**		RunNo:	**51675**					
Prep Date:	**6/1/2018**	Analysis Date:	**6/1/2018**		SeqNo:	**1685638**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0049	0.00020	0.005000	0	98.3	80	120				

Sample ID	**MB-38431**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38431**		RunNo:	**51675**					
Prep Date:	**6/1/2018**	Analysis Date:	**6/1/2018**		SeqNo:	**1685639**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.000055	0.00020								J	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.8	0.50	5.000	0	95.7	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	98.1	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.4	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664832** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	107	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A51220**	RunNo: **51220**
Prep Date:	Analysis Date: **5/11/2018**	SeqNo: **1664833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.9	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.9	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.6	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.0	90	110			
Sulfate	9.4	0.50	10.00	0	93.5	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51551**	RunNo: **51551**
Prep Date:	Analysis Date: **5/25/2018**	SeqNo: **1680671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51551**	RunNo: **51551**
Prep Date:	Analysis Date: **5/25/2018**	SeqNo: **1680672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**LCS-38098**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**38098**		RunNo:	**51307**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/16/2018**		SeqNo:	**1669155**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		4.6	1.0	5.000	0	92.1	70	130			
Surr: DNOP		0.47		0.5000		93.0	76.7	135			

Sample ID	**MB-38098**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**38098**		RunNo:	**51307**					
Prep Date:	**5/14/2018**	Analysis Date:	**5/16/2018**		SeqNo:	**1669156**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	1.0								
Motor Oil Range Organics (MRO)		ND	5.0								
Surr: DNOP		1.0		1.000		99.6	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670869** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	24	1.0	20.00	0	119	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670870** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.078	1.0								J
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	0.12	2.0								J
1-Methylnaphthalene	0.32	4.0								J
2-Methylnaphthalene	0.33	4.0								J
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.13	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670870** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.14	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670870** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **1805682-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB10**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670874** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	60.5	137			
Toluene	23	1.0	20.00	0	116	70	130			
Chlorobenzene	23	1.0	20.00	0	117	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID **1805682-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB10**	Batch ID: **R51363**	RunNo: **51363**
Prep Date:	Analysis Date: **5/17/2018**	SeqNo: **1670875** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	60.5	137	4.34	20	
Toluene	22	1.0	20.00	0	112	70	130	3.22	20	
Chlorobenzene	23	1.0	20.00	0	113	70	130	3.64	20	
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130	3.65	20	
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130	2.28	20	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		107	70	130	0	0	
Surr: Toluene-d8	11		10.00		110	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38139**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672672** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.9	39.7	103			
4-Chloro-3-methylphenol	190	10	200.0	0	94.9	40.5	108			
2-Chlorophenol	160	10	200.0	0	79.9	35	103			
1,4-Dichlorobenzene	70	10	100.0	0	70.4	24.7	93.7			
2,4-Dinitrotoluene	88	10	100.0	0	87.9	35.6	91.4			
N-Nitrosodi-n-propylamine	85	10	100.0	0	85.0	41.6	114			
4-Nitrophenol	130	10	200.0	0	64.8	20.7	74.3			
Pentachlorophenol	160	20	200.0	0	81.4	25.3	98.5			
Phenol	130	10	200.0	0	64.4	20.9	75.1			
Pyrene	86	10	100.0	0	86.1	45.6	108			
1,2,4-Trichlorobenzene	78	10	100.0	0	77.6	30.3	106			
Surr: 2-Fluorophenol	140		200.0		69.4	15	114			
Surr: Phenol-d5	120		200.0		61.5	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		96.8	15	161			
Surr: Nitrobenzene-d5	84		100.0		84.0	29.3	120			
Surr: 2-Fluorobiphenyl	86		100.0		85.7	17.5	116			
Surr: 4-Terphenyl-d14	77		100.0		77.1	21	92.2			

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38139**	RunNo: **51373**
Prep Date: **5/16/2018**	Analysis Date: **5/18/2018**	SeqNo: **1672673** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		64.9	15	114			
Surr: Phenol-d5	110		200.0		52.9	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.1	15	161			
Surr: Nitrobenzene-d5	72		100.0		72.3	29.3	120			
Surr: 2-Fluorobiphenyl	73		100.0		72.9	17.5	116			
Surr: 4-Terphenyl-d14	75		100.0		75.2	21	92.2			

Sample ID **lcs-38192**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.5	39.7	103			
4-Chloro-3-methylphenol	160	10	200.0	0	82.0	40.5	108			
2-Chlorophenol	150	10	200.0	0	73.4	35	103			
1,4-Dichlorobenzene	62	10	100.0	0	62.0	24.7	93.7			
2,4-Dinitrotoluene	79	10	100.0	0	79.4	35.6	91.4			
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.6	41.6	114			
4-Nitrophenol	130	10	200.0	0	63.6	20.7	74.3			
Pentachlorophenol	170	20	200.0	0	83.1	25.3	98.5			
Phenol	96	10	200.0	0	48.2	20.9	75.1			
Pyrene	89	10	100.0	0	89.4	45.6	108			
1,2,4-Trichlorobenzene	68	10	100.0	0	67.6	30.3	106			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **lcs-38192**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		55.8	15	114			
Surr: Phenol-d5	100		200.0		49.9	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		92.8	15	161			
Surr: Nitrobenzene-d5	75		100.0		74.8	29.3	120			
Surr: 2-Fluorobiphenyl	81		100.0		80.7	17.5	116			
Surr: 4-Terphenyl-d14	87		100.0		87.0	21	92.2			

Sample ID **lcsd-38139**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **38139**	RunNo: **51485**
Prep Date: **5/16/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	140	14	142.9	0	96.2	39.7	103	48.5	34.9	R
4-Chloro-3-methylphenol	270	14	285.7	0	94.6	40.5	108	35.0	30.2	R
2-Chlorophenol	260	14	285.7	0	89.3	35	103	46.0	49.5	
1,4-Dichlorobenzene	110	14	142.9	0	74.3	24.7	93.7	40.5	43.2	
2,4-Dinitrotoluene	160	14	142.9	0	110	35.6	91.4	56.2	49.9	SR
N-Nitrosodi-n-propylamine	120	14	142.9	0	83.4	41.6	114	33.4	42.1	
4-Nitrophenol	220	14	285.7	0	78.2	20.7	74.3	53.2	31.5	SR
Pentachlorophenol	290	29	285.7	0	102	25.3	98.5	56.5	52.5	SR
Phenol	150	14	285.7	0	53.5	20.9	75.1	17.1	54.4	
Pyrene	150	14	142.9	0	108	45.6	108	56.9	30.7	SR
1,2,4-Trichlorobenzene	120	14	142.9	0	85.1	30.3	106	44.2	48.1	
Surr: 2-Fluorophenol	190		285.7		67.7	15	114	0	0	
Surr: Phenol-d5	160		285.7		54.4	15	97.9	0	0	
Surr: 2,4,6-Tribromophenol	310		285.7		110	15	161	0	0	
Surr: Nitrobenzene-d5	140		142.9		97.1	29.3	120	0	0	
Surr: 2-Fluorobiphenyl	140		142.9		98.2	17.5	116	0	0	
Surr: 4-Terphenyl-d14	110		142.9		78.6	21	92.2	0	0	

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	13	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		59.2	15	114			
Surr: Phenol-d5	100		200.0		50.2	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.2	15	161			
Surr: Nitrobenzene-d5	73		100.0		73.2	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.0	17.5	116			
Surr: 4-Terphenyl-d14	80		100.0		80.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666370** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	70	130			
Surr: BFB	9.2		10.00		92.0	70	130			

Sample ID **2.5ug gro lcs2**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **B51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666371** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.2	70	130			
Surr: BFB	9.3		10.00		93.3	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **A51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666372** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	10		10.00		103	70	130			

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **B51264**	RunNo: **51264**
Prep Date:	Analysis Date: **5/14/2018**	SeqNo: **1666373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		105	70	130			

Sample ID **1805682-013ams**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-16**	Batch ID: **B51264**	RunNo: **51297**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	57	1.0	10.00	47.47	96.9	70	130			
Surr: BFB	170		200.0		84.7	70	130			

Sample ID **1805682-013amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-16**	Batch ID: **B51264**	RunNo: **51297**
Prep Date:	Analysis Date: **5/15/2018**	SeqNo: **1667451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805682**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling MKT

Sample ID	**1805682-013amsd**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**MKTF-16**	Batch ID:	**B51264**	RunNo:	**51297**
Prep Date:		Analysis Date:	**5/15/2018**	SeqNo:	**1667451** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	56	1.0	10.00	47.47	87.9	70	130	1.59	20	
Surr: BFB	170		200.0		82.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1805682 RcptNo: 1

Received By: **Andy Freeman** **5/11/2018 2:29:00 PM**

Completed By: **Ashley Gallegos** **5/11/2018 2:54:17 PM**

Reviewed By: JO 5-14-18

Labeled by: IO

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 36
(≤2 or >12 unless noted)
Adjusted? NO
Checked by: IO

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.9	Good	Yes			
2	5.1	Good	Yes			
3	5.8	Good	Yes			
4	5.7	Good	Yes			
5	3.8	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: **1805682** RcptNo: **1**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: 5 Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	0825	H_2O	~~MW5~~ FB10	40ml VOA-5	HCl	1805682 -001			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143		Evgeny Vigil	5/11/18	1845
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler Temps: 2.9, 5.1, 5.8, 5.7, 3.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805682	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	0850	H_2O	MKTF-44	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	0940	H_2O	MKTF-33	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	1145
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805682	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	1030	H_2O	MKTF- 22	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	1100	H_2O	EB10	40ml VOA-5	HCl	005			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	~~1700~~ 1143			5/11/18	1145
5/11/18	1429			5/11/18	1429

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805682	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	1135	H_2O	MKTF- 13	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
5/11/18	14:29			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805L082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/10/18	—	H_2O	DUP 10	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/10/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCL	-008										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	1245
5/4/18	14/29			5/11/18	1429

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805b082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/11/18	0740	H_2O	FB11	40ml VOA-5	HCl	-009			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
5/11/18	1429			5/11/18	1429

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-722-0287**
email or Fax#: **Jessica.L.Obrien@Andeavor.com**
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other _____
☒ EDD (Type) **EXCEL**

Turn-Around Time:
☒ Standard ☐ Rush _____
Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**
Project #:
Project Manager: **Jessica O'Brien**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/14/18	0800	H_2O	EB11	40ml VOA-5	HCl	-010			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/14/18	1143			5/15/18	11:45
5/14/18	1429			5/11/18	1429

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805082	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/11/18	0840	H_2O	MKTF-21	40ml VOA-5	HCl	-012			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805482	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/11/18	0930	H_2O	MKTF- 20	40ml VOA-5	HCl	-013			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	10:43
Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (MKTF)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805682	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/11/18	1010	H_2O	MKTF- 16	40ml VOA-5	HCl	-0174			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/11/18	1143			5/11/18	11:45
5/11/18	1429			5/11/18	1429

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 15, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling BW OrderNo.: 1805872

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 5 sample(s) on 5/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 1:09:45 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 1:09:45 PM	38203
Surr: DNOP	107	0	76.7-135		%Rec	1	5/21/2018 1:09:45 PM	38203
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	5/17/2018 1:19:04 AM	R51319
Chloride	0.12	0.029	0.50	J	mg/L	1	5/17/2018 1:19:04 AM	R51319
Bromide	ND	0.027	0.10		mg/L	1	5/17/2018 1:19:04 AM	R51319
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/17/2018 1:19:04 AM	R51319
Sulfate	ND	0.21	0.50		mg/L	1	5/17/2018 1:19:04 AM	R51319
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/17/2018 3:23:10 AM	R51319
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	6/4/2018 10:25:19 AM	A51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 10:25:19 AM	A51699
Calcium	ND	0.078	1.0		mg/L	1	6/4/2018 10:25:19 AM	A51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 10:25:19 AM	A51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 10:25:19 AM	A51699
Iron	ND	0.016	0.020		mg/L	1	6/4/2018 10:25:19 AM	A51699
Magnesium	ND	0.25	1.0		mg/L	1	6/4/2018 10:25:19 AM	A51699
Manganese	ND	0.00039	0.0020		mg/L	1	6/4/2018 10:25:19 AM	A51699
Potassium	ND	0.11	1.0		mg/L	1	6/4/2018 10:25:19 AM	A51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 10:25:19 AM	A51699
Sodium	ND	0.16	1.0		mg/L	1	6/4/2018 10:25:19 AM	A51699
Zinc	0.0084	0.0021	0.010	J	mg/L	1	6/4/2018 10:25:19 AM	A51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	6/4/2018 4:46:39 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	6/4/2018 4:46:39 PM	38206
Chromium	ND	0.0018	0.0060		mg/L	1	6/4/2018 4:46:39 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	6/4/2018 4:46:39 PM	38206
Iron	ND	0.010	0.020		mg/L	1	6/4/2018 4:46:39 PM	38206
Manganese	ND	0.0011	0.0020		mg/L	1	6/4/2018 4:46:39 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	6/4/2018 4:46:39 PM	38206
Zinc	ND	0.0033	0.010		mg/L	1	6/4/2018 4:46:39 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	6/2/2018 7:08:54 PM	C51685
Lead	ND	0.00017	0.00050		mg/L	1	6/2/2018 7:08:54 PM	C51685
Selenium	ND	0.0076	0.010		mg/L	10	6/11/2018 4:03:59 PM	B51888
Uranium	ND	0.000096	0.00050		mg/L	1	6/2/2018 7:08:54 PM	C51685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/22/2018 1:44:47 PM	38206
Lead	ND	0.00023	0.00050		mg/L	1	5/22/2018 1:44:47 PM	38206
Selenium	ND	0.00098	0.0010		mg/L	1	5/22/2018 1:44:47 PM	38206
Uranium	ND	0.000068	0.00050		mg/L	1	5/22/2018 1:44:47 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	ND	0.000037	0.00020		mg/L	1	6/4/2018 4:43:31 PM	38465
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 5:04:56 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 5:04:56 PM	38192
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 5:04:56 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 5:04:56 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 5:04:56 PM	38192
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 5:04:56 PM	38192
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 5:04:56 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 5:04:56 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 5:04:56 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Phenol	ND	6.0	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 5:04:56 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 5:04:56 PM	38192
Surr: 2-Fluorophenol	48.7	0	15-114		%Rec	1	5/23/2018 5:04:56 PM	38192
Surr: Phenol-d5	34.6	0	15-97.9		%Rec	1	5/23/2018 5:04:56 PM	38192
Surr: 2,4,6-Tribromophenol	85.5	0	15-161		%Rec	1	5/23/2018 5:04:56 PM	38192
Surr: Nitrobenzene-d5	74.4	0	29.3-120		%Rec	1	5/23/2018 5:04:56 PM	38192
Surr: 2-Fluorobiphenyl	77.9	0	17.5-116		%Rec	1	5/23/2018 5:04:56 PM	38192
Surr: 4-Terphenyl-d14	94.4	0	21-92.2	S	%Rec	1	5/23/2018 5:04:56 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Toluene	0.098	0.064	1.0	J	µg/L	1	5/21/2018 1:58:21 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Acetone	3.7	0.82	10	J	µg/L	1	5/21/2018 1:58:21 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 1:58:21 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 1:58:21 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 1:58:21 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 1:58:21 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 1:58:21 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 1:58:21 PM	W5141
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	1	5/21/2018 1:58:21 PM	W5141
Surr: 4-Bromofluorobenzene	120	0	70-130		%Rec	1	5/21/2018 1:58:21 PM	W5141
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	5/21/2018 1:58:21 PM	W5141
Surr: Toluene-d8	101	0	70-130		%Rec	1	5/21/2018 1:58:21 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 12:50:00 PM
Lab ID: 1805872-001
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/16/2018 1:13:10 PM	R51321
Surr: BFB	108	0	70-130		%Rec	1	5/16/2018 1:13:10 PM	R51321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 5:34:06 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 5:34:06 PM	38203
Surr: DNOP	102	0	76.7-135		%Rec	1	5/21/2018 5:34:06 PM	38203
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	5/17/2018 2:08:43 AM	R51319
Chloride	1300	2.9	50		mg/L	100	5/29/2018 11:08:46 PM	R51571
Bromide	0.48	0.027	0.10		mg/L	1	5/17/2018 2:08:43 AM	R51319
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/17/2018 2:08:43 AM	R51319
Sulfate	190	4.1	10		mg/L	20	5/17/2018 2:21:07 AM	R51319
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/17/2018 3:35:34 AM	R51319
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.088	0.00099	0.0020		mg/L	1	6/4/2018 10:27:29 AM	A51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 10:27:29 AM	A51699
Calcium	56	0.078	1.0		mg/L	1	6/4/2018 10:27:29 AM	A51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 10:27:29 AM	A51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 10:27:29 AM	A51699
Iron	0.42	0.016	0.020	*	mg/L	1	6/4/2018 10:27:29 AM	A51699
Magnesium	6.7	0.25	1.0		mg/L	1	6/4/2018 10:27:29 AM	A51699
Manganese	0.030	0.00039	0.0020		mg/L	1	6/4/2018 10:27:29 AM	A51699
Potassium	3.0	0.11	1.0		mg/L	1	6/4/2018 10:27:29 AM	A51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 10:27:29 AM	A51699
Sodium	1000	3.3	20		mg/L	20	6/6/2018 5:42:26 PM	A51787
Zinc	0.0059	0.0021	0.010	J	mg/L	1	6/4/2018 10:27:29 AM	A51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.13	0.0010	0.0020		mg/L	1	6/4/2018 4:48:52 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	6/4/2018 4:48:52 PM	38206
Chromium	0.0034	0.0018	0.0060	J	mg/L	1	6/4/2018 4:48:52 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	6/4/2018 4:48:52 PM	38206
Iron	1.5	0.051	0.10	*	mg/L	5	6/4/2018 4:50:53 PM	38206
Manganese	0.048	0.0011	0.0020		mg/L	1	6/4/2018 4:48:52 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	6/4/2018 4:48:52 PM	38206
Zinc	0.0072	0.0033	0.010	J	mg/L	1	6/4/2018 4:48:52 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	6/2/2018 7:18:29 PM	C51685
Lead	ND	0.00087	0.0025		mg/L	5	6/2/2018 7:18:29 PM	C51685
Selenium	ND	0.015	0.020		mg/L	20	6/11/2018 4:08:49 PM	B51888
Uranium	0.048	0.00048	0.0025	*	mg/L	5	6/2/2018 7:18:29 PM	C51685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/22/2018 2:20:44 PM	38206
Lead	ND	0.0011	0.0025		mg/L	5	5/22/2018 2:20:44 PM	38206
Selenium	ND	0.0049	0.0050		mg/L	5	5/22/2018 2:20:44 PM	38206
Uranium	0.043	0.00034	0.0025	*	mg/L	5	5/22/2018 2:20:44 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.00016	0.000037	0.00020	J	mg/L	1	6/4/2018 4:45:44 PM	38465
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 5:33:01 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 5:33:01 PM	38192
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 5:33:01 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 5:33:01 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 5:33:01 PM	38192
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 5:33:01 PM	38192
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 5:33:01 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 5:33:01 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 5:33:01 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Phenol	ND	6.0	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 5:33:01 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 5:33:01 PM	38192
Surr: 2-Fluorophenol	44.0	0	15-114		%Rec	1	5/23/2018 5:33:01 PM	38192
Surr: Phenol-d5	32.6	0	15-97.9		%Rec	1	5/23/2018 5:33:01 PM	38192
Surr: 2,4,6-Tribromophenol	80.9	0	15-161		%Rec	1	5/23/2018 5:33:01 PM	38192
Surr: Nitrobenzene-d5	71.6	0	29.3-120		%Rec	1	5/23/2018 5:33:01 PM	38192
Surr: 2-Fluorobiphenyl	76.2	0	17.5-116		%Rec	1	5/23/2018 5:33:01 PM	38192
Surr: 4-Terphenyl-d14	84.0	0	21-92.2		%Rec	1	5/23/2018 5:33:01 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Methyl tert-butyl ether (MTBE)	32	0.24	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2-Dichloroethane (EDC)	0.63	0.40	1.0	J	µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Acetone	2.0	0.82	10	J	µg/L	1	5/21/2018 2:27:29 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 2:27:29 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 2:27:29 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1-Dichloroethane	0.81	0.40	1.0	J	µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 2:27:29 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 2:27:29 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 2:27:29 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 2:27:29 PM	W5141
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	1	5/21/2018 2:27:29 PM	W5141
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/21/2018 2:27:29 PM	W5141
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	5/21/2018 2:27:29 PM	W5141
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	5/21/2018 2:27:29 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:20:00 PM
Lab ID: 1805872-002
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/16/2018 1:36:12 PM	R51321
Surr: BFB	106	0	70-130		%Rec	1	5/16/2018 1:36:12 PM	R51321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 5:58:14 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 5:58:14 PM	38203
Surr: DNOP	105	0	76.7-135		%Rec	1	5/21/2018 5:58:14 PM	38203
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.088	0.030	0.10	J	mg/L	1	5/17/2018 2:33:31 AM	R51319
Chloride	220	0.59	10		mg/L	20	5/17/2018 2:45:55 AM	R51319
Bromide	0.39	0.027	0.10		mg/L	1	5/17/2018 2:33:31 AM	R51319
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/17/2018 2:33:31 AM	R51319
Sulfate	88	4.1	10		mg/L	20	5/17/2018 2:45:55 AM	R51319
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	5/17/2018 3:47:59 AM	R51319
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.089	0.00099	0.0020		mg/L	1	6/4/2018 10:29:45 AM	A51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 10:29:45 AM	A51699
Calcium	3.6	0.078	1.0		mg/L	1	6/4/2018 10:29:45 AM	A51699
Chromium	0.0019	0.0013	0.0060	J	mg/L	1	6/4/2018 10:29:45 AM	A51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 10:29:45 AM	A51699
Iron	0.35	0.016	0.020	*	mg/L	1	6/4/2018 10:29:45 AM	A51699
Magnesium	0.53	0.25	1.0	J	mg/L	1	6/4/2018 10:29:45 AM	A51699
Manganese	0.016	0.00039	0.0020		mg/L	1	6/4/2018 10:29:45 AM	A51699
Potassium	1.0	0.11	1.0		mg/L	1	6/4/2018 10:29:45 AM	A51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 10:29:45 AM	A51699
Sodium	350	0.82	5.0		mg/L	5	6/4/2018 11:44:50 AM	A51699
Zinc	0.0099	0.0021	0.010	J	mg/L	1	6/4/2018 10:29:45 AM	A51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.13	0.0010	0.0020		mg/L	1	6/4/2018 4:53:17 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	6/4/2018 4:53:17 PM	38206
Chromium	0.0072	0.0018	0.0060		mg/L	1	6/4/2018 4:53:17 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	6/4/2018 4:53:17 PM	38206
Iron	2.4	0.051	0.10	*	mg/L	5	6/4/2018 4:55:10 PM	38206
Manganese	0.051	0.0011	0.0020	*	mg/L	1	6/4/2018 4:53:17 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	6/4/2018 4:53:17 PM	38206
Zinc	0.0088	0.0033	0.010	J	mg/L	1	6/4/2018 4:53:17 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0031	0.0021	0.0050	J	mg/L	5	6/2/2018 7:23:16 PM	C51685
Lead	ND	0.00087	0.0025		mg/L	5	6/2/2018 7:23:16 PM	C51685
Selenium	ND	0.015	0.020		mg/L	20	6/11/2018 4:23:18 PM	B51888
Uranium	0.038	0.00048	0.0025	*	mg/L	5	6/2/2018 7:23:16 PM	C51685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0022	0.00041	0.0010		mg/L	1	5/22/2018 1:49:23 PM	38206
Lead	0.00077	0.00023	0.00050		mg/L	1	5/22/2018 1:49:23 PM	38206
Selenium	0.0021	0.00098	0.0010		mg/L	1	5/22/2018 1:49:23 PM	38206
Uranium	0.036	0.00034	0.0025	*	mg/L	5	5/22/2018 2:23:01 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.000048	0.000037	0.00020	J	mg/L	1	6/4/2018 4:47:57 PM	38465
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzoic acid	ND	6.3	20		µg/L	1	5/23/2018 6:01:16 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 6:01:16 PM	38192
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 6:01:16 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 6:01:16 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 6:01:16 PM	38192
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 6:01:16 PM	38192
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 6:01:16 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 6:01:16 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 6:01:16 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Phenol	ND	6.0	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 6:01:16 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 6:01:16 PM	38192
Surr: 2-Fluorophenol	43.6	0	15-114		%Rec	1	5/23/2018 6:01:16 PM	38192
Surr: Phenol-d5	30.1	0	15-97.9		%Rec	1	5/23/2018 6:01:16 PM	38192
Surr: 2,4,6-Tribromophenol	86.3	0	15-161		%Rec	1	5/23/2018 6:01:16 PM	38192
Surr: Nitrobenzene-d5	68.0	0	29.3-120		%Rec	1	5/23/2018 6:01:16 PM	38192
Surr: 2-Fluorobiphenyl	73.7	0	17.5-116		%Rec	1	5/23/2018 6:01:16 PM	38192
Surr: 4-Terphenyl-d14	82.9	0	21-92.2		%Rec	1	5/23/2018 6:01:16 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Toluene	0.23	0.064	1.0	J	µg/L	1	5/21/2018 2:56:40 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Methyl tert-butyl ether (MTBE)	2.8	0.24	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Acetone	2.0	0.82	10	J	µg/L	1	5/21/2018 2:56:40 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 2:56:40 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 2:56:40 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 2:56:40 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 2:56:40 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 2:56:40 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 2:56:40 PM	W5141
Surr: 1,2-Dichloroethane-d4	98.3	0	70-130		%Rec	1	5/21/2018 2:56:40 PM	W5141
Surr: 4-Bromofluorobenzene	118	0	70-130		%Rec	1	5/21/2018 2:56:40 PM	W5141
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	5/21/2018 2:56:40 PM	W5141
Surr: Toluene-d8	99.8	0	70-130		%Rec	1	5/21/2018 2:56:40 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018 1:50:00 PM
Lab ID: 1805872-003
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/16/2018 1:59:19 PM	R51321
Surr: BFB	105	0	70-130		%Rec	1	5/16/2018 1:59:19 PM	R51321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/21/2018 6:22:33 PM	38203
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/21/2018 6:22:33 PM	38203
Surr: DNOP	101	0	76.7-135		%Rec	1	5/21/2018 6:22:33 PM	38203
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	5/17/2018 2:58:20 AM	R51319
Chloride	1200	2.9	50		mg/L	100	5/29/2018 11:21:11 PM	R51571
Bromide	0.50	0.027	0.10		mg/L	1	5/17/2018 2:58:20 AM	R51319
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/17/2018 2:58:20 AM	R51319
Sulfate	180	4.1	10		mg/L	20	5/17/2018 3:10:45 AM	R51319
Nitrate+Nitrite as N	0.46	0.27	1.0	J	mg/L	5	5/17/2018 4:37:37 AM	R51319
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.088	0.00099	0.0020		mg/L	1	6/4/2018 10:31:50 AM	A51699
Cadmium	ND	0.0010	0.0020		mg/L	1	6/4/2018 10:31:50 AM	A51699
Calcium	55	0.078	1.0		mg/L	1	6/4/2018 10:31:50 AM	A51699
Chromium	ND	0.0013	0.0060		mg/L	1	6/4/2018 10:31:50 AM	A51699
Copper	ND	0.0032	0.0060		mg/L	1	6/4/2018 10:31:50 AM	A51699
Iron	0.34	0.016	0.020	*	mg/L	1	6/4/2018 10:31:50 AM	A51699
Magnesium	6.7	0.25	1.0		mg/L	1	6/4/2018 10:31:50 AM	A51699
Manganese	0.032	0.00039	0.0020		mg/L	1	6/4/2018 10:31:50 AM	A51699
Potassium	3.0	0.11	1.0		mg/L	1	6/4/2018 10:31:50 AM	A51699
Silver	ND	0.0018	0.0050		mg/L	1	6/4/2018 10:31:50 AM	A51699
Sodium	1000	3.3	20		mg/L	20	6/6/2018 5:44:40 PM	A51787
Zinc	0.0072	0.0021	0.010	J	mg/L	1	6/4/2018 10:31:50 AM	A51699
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.13	0.0010	0.0020		mg/L	1	6/4/2018 4:57:26 PM	38206
Cadmium	ND	0.00058	0.0020		mg/L	1	6/4/2018 4:57:26 PM	38206
Chromium	0.0040	0.0018	0.0060	J	mg/L	1	6/4/2018 4:57:26 PM	38206
Copper	ND	0.0041	0.0060		mg/L	1	6/4/2018 4:57:26 PM	38206
Iron	1.7	0.051	0.10	*	mg/L	5	6/4/2018 4:59:28 PM	38206
Manganese	0.048	0.0011	0.0020		mg/L	1	6/4/2018 4:57:26 PM	38206
Silver	ND	0.0012	0.0050		mg/L	1	6/4/2018 4:57:26 PM	38206
Zinc	0.0069	0.0033	0.010	J	mg/L	1	6/4/2018 4:57:26 PM	38206
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	6/2/2018 7:37:47 PM	C51685
Lead	ND	0.00087	0.0025		mg/L	5	6/2/2018 7:37:47 PM	C51685
Selenium	ND	0.015	0.020		mg/L	20	6/11/2018 4:28:10 PM	B51888
Uranium	0.047	0.00048	0.0025	*	mg/L	5	6/2/2018 7:37:47 PM	C51685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/22/2018 2:25:20 PM	38206
Lead	ND	0.0011	0.0025		mg/L	5	5/22/2018 2:25:20 PM	38206
Selenium	ND	0.0049	0.0050		mg/L	5	5/22/2018 2:25:20 PM	38206
Uranium	0.044	0.00034	0.0025	*	mg/L	5	5/22/2018 2:25:20 PM	38206
EPA METHOD 245.1: MERCURY							Analyst: **MED**	
Mercury	0.00015	0.000037	0.00020	J	mg/L	1	6/4/2018 4:50:12 PM	38465
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Acenaphthylene	ND	6.2	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Aniline	ND	6.2	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Anthracene	ND	5.7	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Azobenzene	ND	6.7	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benz(a)anthracene	ND	5.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benzo(a)pyrene	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Benzoic acid	13	6.3	20	J	µg/L	1	5/23/2018 6:29:50 PM	38192
Benzyl alcohol	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Carbazole	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Chloroaniline	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Chloronaphthalene	ND	6.1	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Chlorophenol	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Chrysene	ND	6.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Dibenzofuran	ND	6.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Diethyl phthalate	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Dimethyl phthalate	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	5/23/2018 6:29:50 PM	38192
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	5/23/2018 6:29:50 PM	38192
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	5/23/2018 6:29:50 PM	38192
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Fluoranthene	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Fluorene	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Hexachlorobenzene	ND	6.2	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Hexachlorobutadiene	ND	6.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Hexachloroethane	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Isophorone	ND	6.2	10		µg/L	1	5/23/2018 6:29:50 PM	38192
1-Methylnaphthalene	ND	7.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Methylnaphthalene	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Methylphenol	ND	6.3	10		µg/L	1	5/23/2018 6:29:50 PM	38192
3+4-Methylphenol	ND	5.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	5/23/2018 6:29:50 PM	38192
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Naphthalene	ND	5.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Nitroaniline	ND	5.9	10		µg/L	1	5/23/2018 6:29:50 PM	38192
3-Nitroaniline	ND	6.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Nitroaniline	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Nitrobenzene	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2-Nitrophenol	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
4-Nitrophenol	ND	5.6	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Pentachlorophenol	ND	5.3	20		µg/L	1	5/23/2018 6:29:50 PM	38192
Phenanthrene	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Phenol	ND	6.0	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Pyrene	ND	6.5	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Pyridine	ND	5.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	5/23/2018 6:29:50 PM	38192

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	5/23/2018 6:29:50 PM	38192
Surr: 2-Fluorophenol	42.6	0	15-114		%Rec	1	5/23/2018 6:29:50 PM	38192
Surr: Phenol-d5	29.0	0	15-97.9		%Rec	1	5/23/2018 6:29:50 PM	38192
Surr: 2,4,6-Tribromophenol	70.6	0	15-161		%Rec	1	5/23/2018 6:29:50 PM	38192
Surr: Nitrobenzene-d5	67.6	0	29.3-120		%Rec	1	5/23/2018 6:29:50 PM	38192
Surr: 2-Fluorobiphenyl	69.7	0	17.5-116		%Rec	1	5/23/2018 6:29:50 PM	38192
Surr: 4-Terphenyl-d14	78.9	0	21-92.2		%Rec	1	5/23/2018 6:29:50 PM	38192
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Methyl tert-butyl ether (MTBE)	31	0.24	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2-Dichloroethane (EDC)	0.65	0.40	1.0	J	µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Acetone	2.6	0.82	10	J	µg/L	1	5/21/2018 3:25:56 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 3:25:56 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 3:25:56 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1-Dichloroethane	0.81	0.40	1.0	J	µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 3:25:56 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 3:25:56 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 3:25:56 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 3:25:56 PM	W5141
Surr: 1,2-Dichloroethane-d4	99.6	0	70-130		%Rec	1	5/21/2018 3:25:56 PM	W5141
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/21/2018 3:25:56 PM	W5141
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	5/21/2018 3:25:56 PM	W5141
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	5/21/2018 3:25:56 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 11
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/14/2018
Lab ID: 1805872-004
Matrix: AQUEOUS
Received Date: 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/16/2018 2:22:24 PM	R51321
Surr: BFB	106	0	70-130		%Rec	1	5/16/2018 2:22:24 PM	R51321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805872-005 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Acetone	2.6	0.82	10	J	µg/L	1	5/21/2018 3:55:04 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 3:55:04 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 3:55:04 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805872-005 **Matrix:** AQUEOUS **Received Date:** 5/16/2018 9:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 3:55:04 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 3:55:04 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 3:55:04 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 3:55:04 PM	W5141
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	1	5/21/2018 3:55:04 PM	W5141
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/21/2018 3:55:04 PM	W5141
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	5/21/2018 3:55:04 PM	W5141
Surr: Toluene-d8	100	0	70-130		%Rec	1	5/21/2018 3:55:04 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/16/2018 2:45:25 PM	R51321
Surr: BFB	106	0	70-130		%Rec	1	5/16/2018 2:45:25 PM	R51321

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51699**	RunNo: **51699**
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1688419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51699**	RunNo: **51699**
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1688420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0053	0.0060	0.006000	0	88.0	50	150			J
Iron	0.018	0.020	0.02000	0	89.8	50	150			J
Magnesium	0.49	1.0	0.5000	0	97.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.56	1.0	0.5000	0	112	50	150			J
Silver	0.0053	0.0050	0.005000	0	107	50	150			
Sodium	0.62	1.0	0.5000	0	124	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51699**	RunNo: **51699**
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1688421** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.8	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.0	85	115			
Calcium	51	1.0	50.00	0	103	85	115			
Chromium	0.49	0.0060	0.5000	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51699**			RunNo: **51699**					
Prep Date:		Analysis Date: **6/4/2018**			SeqNo: **1688421**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	97.4	85	115			
Iron	0.52	0.020	0.5000	0	105	85	115			
Magnesium	52	1.0	50.00	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	97.0	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	53	1.0	50.00	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A51787**			RunNo: **51787**					
Prep Date:		Analysis Date: **6/6/2018**			SeqNo: **1690923**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A51787**			RunNo: **51787**					
Prep Date:		Analysis Date: **6/6/2018**			SeqNo: **1690924**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.50	1.0	0.5000	0	101	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A51787**			RunNo: **51787**					
Prep Date:		Analysis Date: **6/6/2018**			SeqNo: **1690925**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **MB-38206**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38206**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	102	50	150			
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Chromium	0.0058	0.0060	0.006000	0	97.5	50	150			J
Copper	0.0047	0.0060	0.006000	0	78.7	50	150			J
Iron	0.020	0.020	0.02000	0	98.0	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J
Zinc	0.0060	0.010	0.005000	0	119	50	150			J

Sample ID **LCS-38206**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38206**	RunNo: **51409**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Chromium	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.47	0.0060	0.5000	0	94.9	85	115			
Iron	0.48	0.020	0.5000	0	96.2	85	115			
Manganese	0.46	0.0020	0.5000	0	92.8	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	94.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.4	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID **1805872-001EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB12**	Batch ID: **C51685**	RunNo: **51685**
Prep Date:	Analysis Date: **6/2/2018**	SeqNo: **1686506** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	87.8	70	130			
Lead	0.013	0.00050	0.01250	0	104	70	130			
Uranium	0.013	0.00050	0.01250	0	104	70	130			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51888**	RunNo: **51888**
Prep Date:	Analysis Date: **6/11/2018**	SeqNo: **1695884** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51888**	RunNo:	**51888**					
Prep Date:		Analysis Date:	**6/11/2018**	SeqNo:	**1695952**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.0010	0.0010	0.001000	0	103	50	150			

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B51888**	RunNo:	**51888**					
Prep Date:		Analysis Date:	**6/11/2018**	SeqNo:	**1695954**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	90.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID	**MB-38206**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674398**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-38206**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674400**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Sample ID	**MSLLLCS-38206**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38206**	RunNo:	**51438**					
Prep Date:	**5/18/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674402**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	113	50	150			
Lead	0.00059	0.00050	0.0005000	0	118	50	150			
Selenium	0.0011	0.0010	0.001000	0	113	50	150			
Uranium	0.00061	0.00050	0.0005000	0	122	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID	**MB-38465**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38465**	RunNo:	**51722**					
Prep Date:	**6/4/2018**	Analysis Date:	**6/4/2018**	SeqNo:	**1688249**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-38465**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38465**	RunNo:	**51722**					
Prep Date:	**6/4/2018**	Analysis Date:	**6/4/2018**	SeqNo:	**1688250**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51319**	RunNo: **51319**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51319**	RunNo: **51319**
Prep Date:	Analysis Date: **5/16/2018**	SeqNo: **1669818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.7	0.50	5.000	0	94.4	90	110			
Bromide	2.4	0.10	2.500	0	96.4	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.7	90	110			
Sulfate	9.3	0.50	10.00	0	93.2	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51571**	RunNo: **51571**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51571**	RunNo: **51571**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **LCS-38203**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38203**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673816** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	70	130			
Surr: DNOP	0.49		0.5000		97.6	76.7	135			

Sample ID **MB-38203**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38203**	RunNo: **51394**
Prep Date: **5/18/2018**	Analysis Date: **5/21/2018**	SeqNo: **1673817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.0	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	1.9	10								J
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.18	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.34	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.8	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	9.9		10.00		99.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **lcs-38192**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676997** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.5	39.7	103			
4-Chloro-3-methylphenol	160	10	200.0	0	82.0	40.5	108			
2-Chlorophenol	150	10	200.0	0	73.4	35	103			
1,4-Dichlorobenzene	62	10	100.0	0	62.0	24.7	93.7			
2,4-Dinitrotoluene	79	10	100.0	0	79.4	35.6	91.4			
N-Nitrosodi-n-propylamine	69	10	100.0	0	68.6	41.6	114			
4-Nitrophenol	130	10	200.0	0	63.6	20.7	74.3			
Pentachlorophenol	170	20	200.0	0	83.1	25.3	98.5			
Phenol	96	10	200.0	0	48.2	20.9	75.1			
Pyrene	89	10	100.0	0	89.4	45.6	108			
1,2,4-Trichlorobenzene	68	10	100.0	0	67.6	30.3	106			
Surr: 2-Fluorophenol	110		200.0		55.8	15	114			
Surr: Phenol-d5	100		200.0		49.9	15	97.9			
Surr: 2,4,6-Tribromophenol	190		200.0		92.8	15	161			
Surr: Nitrobenzene-d5	75		100.0		74.8	29.3	120			
Surr: 2-Fluorobiphenyl	81		100.0		80.7	17.5	116			
Surr: 4-Terphenyl-d14	87		100.0		87.0	21	92.2			

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	13	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID **mb-38192**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **38192**	RunNo: **51485**	
Prep Date: **5/18/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676999**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		59.2	15	114			
Surr: Phenol-d5	100		200.0		50.2	15	97.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.2	15	161			
Surr: Nitrobenzene-d5	73		100.0		73.2	29.3	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.0	17.5	116			
Surr: 4-Terphenyl-d14	80		100.0		80.0	21	92.2			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805872**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling BW

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R51321**		RunNo:	**51321**					
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669183**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.49	0.050	0.5000	0	97.4	70	130			
Surr: BFB		9.7		10.00		96.8	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R51321**		RunNo:	**51321**					
Prep Date:		Analysis Date:	**5/16/2018**		SeqNo:	**1669262**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		11		10.00		106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805872 | RcptNo: 1

Received By: **Isaiah Ortiz** 5/16/2018 9:45:00 AM IO

Completed By: **Ashley Gallegos** 5/16/2018 10:33:46 AM AG

Reviewed By: AG 05/16/18 Labeled by: IO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: AO

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (BW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: 0.1 ~ 0.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805872	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/14/18	1250	H_2O	FB12 [redacted]	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
5/15/18	0700	[redacted]	Courier J.C.	5/16/18	945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (BW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: X Yes ☐ No

Sample Temperature: 0.1 - 0.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805872	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/14/18	1320	H_2O	BW-5C	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/15/18	0700			5/16/18	945
Date	Time	Relinquished by	Received by	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (BW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐ Yes~~ ☐ No

Sample Temperature: 0.1 - 0.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805872	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/14/18	1350	H_2O	BW-5B	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
5/15/18	0700		J. CA	5/16/18	945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (BW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 0.1 – 0.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805873	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/14/18	–	H_2O	DUP11	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber-1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/14/18	–	H_2O	TRIP BLANK	40 ml VOA-3	HCL											X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/15/18	0700		Courier	5/16/18	945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 15, 2018

Jessica O'Brien

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 2nd Quarter 2018 Groundwater Sampling OW OrderNo.: 1805972

Dear Jessica O'Brien:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1805972**
Date Reported: **6/15/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 8:45:00 AM
Lab ID: 1805972-001
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	5/22/2018 7:41:11 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/23/2018 12:42:13 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 12:42:13 PM	38276
Surr: DNOP	114	0	76.7-135		%Rec	1	5/23/2018 12:42:13 PM	38276
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/29/2018 7:11:43 PM	R51607
Chloride	0.21	0.029	0.50	J	mg/L	1	5/29/2018 7:11:43 PM	R51607
Bromide	ND	0.027	0.10		mg/L	1	5/29/2018 7:11:43 PM	R51607
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/29/2018 7:11:43 PM	R51607
Sulfate	ND	0.21	0.50		mg/L	1	5/29/2018 7:11:43 PM	R51607
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	6/5/2018 9:09:58 AM	R51746
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	5/31/2018 3:44:43 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:24:01 PM	E51452
Calcium	ND	0.078	1.0		mg/L	1	5/23/2018 7:24:01 PM	E51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 3:44:43 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:44:43 PM	A51646
Iron	0.024	0.016	0.020		mg/L	1	5/31/2018 3:44:43 PM	A51646
Magnesium	ND	0.25	1.0		mg/L	1	5/23/2018 7:24:01 PM	E51452
Manganese	ND	0.00039	0.0020		mg/L	1	5/31/2018 3:44:43 PM	A51646
Potassium	ND	0.11	1.0		mg/L	1	5/23/2018 7:24:01 PM	E51452
Silver	ND	0.0018	0.0050		mg/L	1	5/23/2018 7:24:01 PM	E51452
Sodium	ND	0.16	1.0		mg/L	1	5/23/2018 7:24:01 PM	E51452
Zinc	0.0068	0.0021	0.010	J	mg/L	1	5/31/2018 3:44:43 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	5/24/2018 4:34:10 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:34:10 PM	38259
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 4:34:10 PM	38259
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 4:34:10 PM	38259
Iron	ND	0.010	0.020		mg/L	1	5/24/2018 4:34:10 PM	38259
Manganese	ND	0.0011	0.0020		mg/L	1	5/24/2018 4:34:10 PM	38259
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 4:34:10 PM	38259
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 4:34:10 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	5/21/2018 3:51:35 PM	A51420
Lead	ND	0.00017	0.00050		mg/L	1	5/21/2018 3:51:35 PM	A51420

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 8:45:00 AM
Lab ID: 1805972-001
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	ND	0.00076	0.0010		mg/L	1	5/21/2018 3:51:35 PM	A51420
Uranium	ND	0.000096	0.00050		mg/L	1	5/21/2018 3:51:35 PM	A51420
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	5/23/2018 5:24:44 PM	38259
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 5:24:44 PM	38259
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 5:24:44 PM	38259
Uranium	ND	0.000068	0.00050		mg/L	1	5/23/2018 5:24:44 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000085	0.000037	0.00020	J	mg/L	1	5/23/2018 12:17:33 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Toluene	0.10	0.064	1.0	J	µg/L	1	5/21/2018 4:24:11 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Acetone	6.5	0.82	10	J	µg/L	1	5/21/2018 4:24:11 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 4:24:11 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 4:24:11 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 8:45:00 AM
Lab ID: 1805972-001 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 4:24:11 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 4:24:11 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 4:24:11 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 4:24:11 PM	W5141
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	5/21/2018 4:24:11 PM	W5141
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/21/2018 4:24:11 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 8:45:00 AM
Lab ID: 1805972-001 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	5/21/2018 4:24:11 PM	W5141
Surr: Toluene-d8	98.7	0	70-130		%Rec	1	5/21/2018 4:24:11 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 11:32:36 AM	R51413
Surr: BFB	109	0	70-130		%Rec	1	5/21/2018 11:32:36 AM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 9:20:00 AM
Lab ID: 1805972-002
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/22/2018 7:56:43 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/23/2018 1:54:43 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 1:54:43 PM	38276
Surr: DNOP	114	0	76.7-135		%Rec	1	5/23/2018 1:54:43 PM	38276
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.11	0.030	0.10		mg/L	1	5/29/2018 7:37:26 PM	R51607
Chloride	110	0.59	10		mg/L	20	5/29/2018 7:50:18 PM	R51607
Bromide	0.29	0.027	0.10		mg/L	1	5/29/2018 7:37:26 PM	R51607
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/29/2018 7:37:26 PM	R51607
Sulfate	140	4.1	10		mg/L	20	5/29/2018 7:50:18 PM	R51607
Nitrate+Nitrite as N	0.35	0.27	1.0	J	mg/L	5	6/5/2018 9:22:22 AM	R51746
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.033	0.00099	0.0020		mg/L	1	5/31/2018 3:46:53 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:28:15 PM	E51452
Calcium	2.2	0.078	1.0		mg/L	1	5/23/2018 7:28:15 PM	E51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 3:46:53 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:46:53 PM	A51646
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 3:46:53 PM	A51646
Magnesium	ND	0.25	1.0		mg/L	1	5/23/2018 7:28:15 PM	E51452
Manganese	0.0045	0.00039	0.0020		mg/L	1	5/31/2018 3:46:53 PM	A51646
Potassium	0.67	0.11	1.0	J	mg/L	1	5/23/2018 7:28:15 PM	E51452
Silver	ND	0.0018	0.0050		mg/L	1	5/23/2018 7:28:15 PM	E51452
Sodium	330	1.6	10		mg/L	10	5/23/2018 7:36:28 PM	E51452
Zinc	0.0074	0.0021	0.010	J	mg/L	1	5/31/2018 3:46:53 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.040	0.0010	0.0020		mg/L	1	5/24/2018 4:36:20 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:36:20 PM	38259
Chromium	0.0029	0.0018	0.0060	J	mg/L	1	5/24/2018 4:36:20 PM	38259
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 4:36:20 PM	38259
Iron	0.27	0.051	0.10		mg/L	5	6/4/2018 4:22:51 PM	38388
Manganese	0.018	0.0011	0.0020		mg/L	1	5/24/2018 4:36:20 PM	38259
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 4:36:20 PM	38259
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 4:36:20 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00074	0.00042	0.0010	J	mg/L	1	5/21/2018 3:53:58 PM	A51420
Lead	ND	0.00017	0.00050		mg/L	1	5/21/2018 3:53:58 PM	A51420

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 9:20:00 AM
Lab ID: 1805972-002
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	0.0024	0.00076	0.0010		mg/L	1	5/21/2018 3:53:58 PM	A51420
Uranium	0.034	0.00048	0.0025	*	mg/L	5	5/23/2018 2:52:20 PM	B51469
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00081	0.00041	0.0010	J	mg/L	1	5/23/2018 5:36:10 PM	38259
Lead	0.00032	0.00023	0.00050	J	mg/L	1	5/23/2018 5:36:10 PM	38259
Selenium	0.0023	0.00098	0.0010		mg/L	1	5/23/2018 5:36:10 PM	38259
Uranium	0.035	0.00034	0.0025	*	mg/L	5	6/1/2018 4:01:03 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000037	0.00020	J	mg/L	1	5/23/2018 12:19:45 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Methyl tert-butyl ether (MTBE)	2.0	0.24	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Acetone	ND	0.82	10		µg/L	1	5/21/2018 4:53:31 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 4:53:31 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 4:53:31 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 9:20:00 AM
Lab ID: 1805972-002
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 4:53:31 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 4:53:31 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 4:53:31 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 4:53:31 PM	W5141
Surr: 1,2-Dichloroethane-d4	98.3	0	70-130		%Rec	1	5/21/2018 4:53:31 PM	W5141
Surr: 4-Bromofluorobenzene	115	0	70-130		%Rec	1	5/21/2018 4:53:31 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 9:20:00 AM
Lab ID: 1805972-002
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	5/21/2018 4:53:31 PM	W5141
Surr: Toluene-d8	99.2	0	70-130		%Rec	1	5/21/2018 4:53:31 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 12:18:45 PM	R51413
Surr: BFB	111	0	70-130		%Rec	1	5/21/2018 12:18:45 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 11:25:00 AM
Lab ID: 1805972-003 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/22/2018 8:12:00 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/23/2018 2:18:51 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 2:18:51 PM	38276
Surr: DNOP	111	0	76.7-135		%Rec	1	5/23/2018 2:18:51 PM	38276
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	5/29/2018 8:03:09 PM	R51607
Chloride	850	1.5	25		mg/L	50	6/5/2018 8:57:33 AM	R51746
Bromide	0.23	0.027	0.10		mg/L	1	5/29/2018 8:03:09 PM	R51607
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/29/2018 8:03:09 PM	R51607
Sulfate	200	4.1	10		mg/L	20	5/29/2018 8:16:01 PM	R51607
Nitrate+Nitrite as N	0.89	0.27	1.0	J	mg/L	5	6/5/2018 9:34:47 AM	R51746
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.053	0.00099	0.0020		mg/L	1	5/31/2018 3:48:52 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:38:40 PM	E51452
Calcium	88	0.078	1.0		mg/L	1	5/23/2018 7:38:40 PM	E51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 3:48:52 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:48:52 PM	A51646
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 3:48:52 PM	A51646
Magnesium	15	0.25	1.0		mg/L	1	5/23/2018 7:38:40 PM	E51452
Manganese	0.075	0.00039	0.0020	*	mg/L	1	5/31/2018 3:48:52 PM	A51646
Potassium	1.3	0.11	1.0		mg/L	1	5/23/2018 7:38:40 PM	E51452
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 8:15:15 PM	A51516
Sodium	700	1.6	10		mg/L	10	5/23/2018 7:40:53 PM	E51452
Zinc	0.0058	0.0021	0.010	J	mg/L	1	5/31/2018 3:48:52 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.054	0.0010	0.0020		mg/L	1	5/24/2018 4:38:24 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:38:24 PM	38259
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 4:38:24 PM	38259
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 4:38:24 PM	38259
Iron	ND	0.010	0.020		mg/L	1	5/24/2018 4:38:24 PM	38259
Manganese	0.075	0.0011	0.0020	*	mg/L	1	5/24/2018 4:38:24 PM	38259
Silver	0.0014	0.0012	0.0050	J	mg/L	1	5/24/2018 4:38:24 PM	38259
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 4:38:24 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	5/23/2018 2:54:40 PM	B51469
Lead	ND	0.00087	0.0025		mg/L	5	5/23/2018 2:54:40 PM	B51469

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 11:25:00 AM
Lab ID: 1805972-003
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	0.012	0.0038	0.0050		mg/L	5	5/23/2018 2:54:40 PM	B51469
Uranium	0.055	0.00048	0.0025	*	mg/L	5	5/23/2018 2:54:40 PM	B51469
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	5/23/2018 5:38:27 PM	38259
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 5:38:27 PM	38259
Selenium	0.012	0.00098	0.0010		mg/L	1	5/23/2018 5:38:27 PM	38259
Uranium	0.056	0.00034	0.0025	*	mg/L	5	6/1/2018 4:04:53 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000098	0.000037	0.00020	J	mg/L	1	5/23/2018 12:21:57 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Methyl tert-butyl ether (MTBE)	23	0.24	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2-Dichloroethane (EDC)	0.66	0.40	1.0	J	µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Acetone	1.5	0.82	10	J	µg/L	1	5/21/2018 5:22:53 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 5:22:53 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 5:22:53 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
cis-1,2-DCE	0.35	0.20	1.0	J	µg/L	1	5/21/2018 5:22:53 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 11:25:00 AM
Lab ID: 1805972-003 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1-Dichloroethane	1.3	0.40	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1-Dichloroethene	0.94	0.081	1.0	J	µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 5:22:53 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 5:22:53 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 5:22:53 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 5:22:53 PM	W5141
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	5/21/2018 5:22:53 PM	W5141
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	5/21/2018 5:22:53 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 11:25:00 AM
Lab ID: 1805972-003 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	5/21/2018 5:22:53 PM	W5141
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	5/21/2018 5:22:53 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 12:41:58 PM	R51413
Surr: BFB	108	0	70-130		%Rec	1	5/21/2018 12:41:58 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 2:10:00 PM
Lab ID: 1805972-004 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/22/2018 8:27:23 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/23/2018 2:43:10 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 2:43:10 PM	38276
Surr: DNOP	118	0	76.7-135		%Rec	1	5/23/2018 2:43:10 PM	38276
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.018	0.00099	0.0020		mg/L	1	5/31/2018 3:51:10 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:43:07 PM	E51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 3:51:10 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:51:10 PM	A51646
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 3:51:10 PM	A51646
Manganese	0.020	0.00039	0.0020		mg/L	1	5/31/2018 3:51:10 PM	A51646
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 8:17:32 PM	A51516
Zinc	0.0060	0.0021	0.010	J	mg/L	1	5/31/2018 3:51:10 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.019	0.0010	0.0020		mg/L	1	5/24/2018 4:40:42 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:40:42 PM	38259
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 4:40:42 PM	38259
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 4:40:42 PM	38259
Iron	ND	0.010	0.020		mg/L	1	5/24/2018 4:40:42 PM	38259
Manganese	0.020	0.0011	0.0020		mg/L	1	5/24/2018 4:40:42 PM	38259
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 4:40:42 PM	38259
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 4:40:42 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00080	0.00042	0.0010	J	mg/L	1	5/21/2018 4:10:45 PM	B51420
Lead	ND	0.00017	0.00050		mg/L	1	5/21/2018 4:10:45 PM	B51420
Selenium	ND	0.00076	0.0010		mg/L	1	5/21/2018 4:10:45 PM	B51420
Uranium	0.016	0.000096	0.00050		mg/L	1	5/21/2018 4:10:45 PM	B51420
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00088	0.00041	0.0010	J	mg/L	1	5/23/2018 5:40:45 PM	38259
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 5:40:45 PM	38259
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 5:40:45 PM	38259
Uranium	0.014	0.000068	0.00050		mg/L	1	5/23/2018 5:40:45 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000093	0.000037	0.00020	J	mg/L	1	5/23/2018 12:24:09 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 2:10:00 PM
Lab ID: 1805972-004 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Methyl tert-butyl ether (MTBE)	68	0.24	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2-Dichloroethane (EDC)	0.81	0.40	1.0	J	µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Acetone	1.1	0.82	10	J	µg/L	1	5/21/2018 5:51:57 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 5:51:57 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 5:51:57 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 2:10:00 PM
Lab ID: 1805972-004 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 5:51:57 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 5:51:57 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 5:51:57 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 5:51:57 PM	W5141
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	5/21/2018 5:51:57 PM	W5141
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	5/21/2018 5:51:57 PM	W5141
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/21/2018 5:51:57 PM	W5141
Surr: Toluene-d8	99.5	0	70-130		%Rec	1	5/21/2018 5:51:57 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 1:05:06 PM	R51413
Surr: BFB	112	0	70-130		%Rec	1	5/21/2018 1:05:06 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 3:25:00 PM
Lab ID: 1805972-005 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	5/22/2018 8:57:58 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.4	0.63	1.0		mg/L	1	5/23/2018 3:07:17 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 3:07:17 PM	38276
Surr: DNOP	130	0	76.7-135		%Rec	1	5/23/2018 3:07:17 PM	38276
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.2	0.0049	0.010	*	mg/L	5	5/31/2018 3:55:16 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:47:23 PM	E51452
Chromium	ND	0.0013	0.0060		mg/L	1	5/31/2018 3:53:17 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:53:17 PM	A51646
Iron	4.4	0.082	0.10	*	mg/L	5	5/31/2018 3:55:16 PM	A51646
Manganese	2.0	0.0020	0.010	*	mg/L	5	5/31/2018 3:55:16 PM	A51646
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 8:19:39 PM	A51516
Zinc	0.0054	0.0021	0.010	J	mg/L	1	5/31/2018 3:53:17 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.4	0.0050	0.010	*	mg/L	5	5/24/2018 10:27:28 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:42:49 PM	38259
Chromium	ND	0.0018	0.0060		mg/L	1	5/24/2018 4:42:49 PM	38259
Copper	ND	0.0041	0.0060		mg/L	1	5/24/2018 4:42:49 PM	38259
Iron	4.7	0.10	0.20	*	mg/L	10	6/4/2018 4:27:26 PM	38388
Manganese	2.2	0.0055	0.010	*	mg/L	5	5/24/2018 10:27:28 PM	38259
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 4:42:49 PM	38259
Zinc	ND	0.0033	0.010		mg/L	1	5/24/2018 4:42:49 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0060	0.00042	0.0010		mg/L	1	5/21/2018 4:13:08 PM	B51420
Lead	ND	0.00017	0.00050		mg/L	1	5/21/2018 4:13:08 PM	B51420
Selenium	ND	0.00076	0.0010		mg/L	1	5/21/2018 4:13:08 PM	B51420
Uranium	0.0033	0.000096	0.00050		mg/L	1	5/21/2018 4:13:08 PM	B51420
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0065	0.00041	0.0010		mg/L	1	5/23/2018 5:43:03 PM	38259
Lead	ND	0.00023	0.00050		mg/L	1	5/23/2018 5:43:03 PM	38259
Selenium	ND	0.00098	0.0010		mg/L	1	5/23/2018 5:43:03 PM	38259
Uranium	0.0031	0.000068	0.00050		mg/L	1	5/23/2018 5:43:03 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000097	0.000037	0.00020	J	mg/L	1	5/23/2018 12:26:22 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 3:25:00 PM
Lab ID: 1805972-005
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	15000	62	1000		µg/L	1E+	5/21/2018 7:19:38 PM	W5141
Toluene	8.8	6.4	100	J	µg/L	100	5/21/2018 7:48:42 PM	W5141
Ethylbenzene	710	9.3	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Methyl tert-butyl ether (MTBE)	670	24	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2,4-Trimethylbenzene	ND	11	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,3,5-Trimethylbenzene	ND	8.7	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2-Dibromoethane (EDB)	ND	13	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Naphthalene	17	11	200	J	µg/L	100	5/21/2018 7:48:42 PM	W5141
1-Methylnaphthalene	ND	16	400		µg/L	100	5/21/2018 7:48:42 PM	W5141
2-Methylnaphthalene	ND	15	400		µg/L	100	5/21/2018 7:48:42 PM	W5141
Acetone	ND	82	1000		µg/L	100	5/21/2018 7:48:42 PM	W5141
Bromobenzene	ND	14	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Bromodichloromethane	ND	18	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Bromoform	ND	21	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Bromomethane	ND	26	300		µg/L	100	5/21/2018 7:48:42 PM	W5141
2-Butanone	ND	110	1000		µg/L	100	5/21/2018 7:48:42 PM	W5141
Carbon disulfide	ND	40	1000		µg/L	100	5/21/2018 7:48:42 PM	W5141
Carbon Tetrachloride	ND	11	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Chlorobenzene	ND	11	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Chloroethane	ND	23	200		µg/L	100	5/21/2018 7:48:42 PM	W5141
Chloroform	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Chloromethane	ND	29	300		µg/L	100	5/21/2018 7:48:42 PM	W5141
2-Chlorotoluene	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
4-Chlorotoluene	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
cis-1,2-DCE	ND	20	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
cis-1,3-Dichloropropene	ND	8.2	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2-Dibromo-3-chloropropane	ND	140	200		µg/L	100	5/21/2018 7:48:42 PM	W5141
Dibromochloromethane	ND	7.2	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Dibromomethane	ND	9.1	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2-Dichlorobenzene	ND	9.0	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,3-Dichlorobenzene	ND	15	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,4-Dichlorobenzene	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Dichlorodifluoromethane	ND	100	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1-Dichloroethane	ND	40	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1-Dichloroethene	ND	8.1	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2-Dichloropropane	ND	10	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,3-Dichloropropane	ND	17	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
2,2-Dichloropropane	ND	16	200		µg/L	100	5/21/2018 7:48:42 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018 3:25:00 PM
Lab ID: 1805972-005 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	9.3	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Hexachlorobutadiene	ND	80	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
2-Hexanone	ND	66	1000		µg/L	100	5/21/2018 7:48:42 PM	W5141
Isopropylbenzene	14	5.1	100	J	µg/L	100	5/21/2018 7:48:42 PM	W5141
4-Isopropyltoluene	ND	9.6	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
4-Methyl-2-pentanone	ND	71	1000		µg/L	100	5/21/2018 7:48:42 PM	W5141
Methylene Chloride	ND	11	300		µg/L	100	5/21/2018 7:48:42 PM	W5141
n-Butylbenzene	ND	13	300		µg/L	100	5/21/2018 7:48:42 PM	W5141
n-Propylbenzene	27	7.4	100	J	µg/L	100	5/21/2018 7:48:42 PM	W5141
sec-Butylbenzene	ND	11	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Styrene	ND	16	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
tert-Butylbenzene	ND	10	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1,1,2-Tetrachloroethane	ND	10	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1,2,2-Tetrachloroethane	ND	14	200		µg/L	100	5/21/2018 7:48:42 PM	W5141
Tetrachloroethene (PCE)	ND	13	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
trans-1,2-DCE	ND	18	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
trans-1,3-Dichloropropene	ND	22	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2,3-Trichlorobenzene	ND	12	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2,4-Trichlorobenzene	ND	14	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1,1-Trichloroethane	ND	7.3	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,1,2-Trichloroethane	ND	14	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Trichloroethene (TCE)	ND	11	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Trichlorofluoromethane	ND	18	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
1,2,3-Trichloropropane	ND	39	200		µg/L	100	5/21/2018 7:48:42 PM	W5141
Vinyl chloride	ND	18	100		µg/L	100	5/21/2018 7:48:42 PM	W5141
Xylenes, Total	ND	32	150		µg/L	100	5/21/2018 7:48:42 PM	W5141
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	100	5/21/2018 7:48:42 PM	W5141
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	100	5/21/2018 7:48:42 PM	W5141
Surr: Dibromofluoromethane	104	0	70-130		%Rec	100	5/21/2018 7:48:42 PM	W5141
Surr: Toluene-d8	99.7	0	70-130		%Rec	100	5/21/2018 7:48:42 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	30	0.48	2.5		mg/L	50	5/21/2018 1:51:15 PM	R51413
Surr: BFB	105	0	70-130		%Rec	50	5/21/2018 1:51:15 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018
Lab ID: 1805972-006
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	5/22/2018 9:13:19 PM	38219
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	5/23/2018 3:31:31 PM	38276
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	5/23/2018 3:31:31 PM	38276
Surr: DNOP	124	0	76.7-135		%Rec	1	5/23/2018 3:31:31 PM	38276
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.12	0.030	0.10		mg/L	1	5/29/2018 8:28:52 PM	R51607
Chloride	110	0.59	10		mg/L	20	5/29/2018 8:41:44 PM	R51607
Bromide	0.30	0.027	0.10		mg/L	1	5/29/2018 8:28:52 PM	R51607
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	5/29/2018 8:28:52 PM	R51607
Sulfate	130	4.1	10		mg/L	20	5/29/2018 8:41:44 PM	R51607
Nitrate+Nitrite as N	0.33	0.27	1.0	J	mg/L	5	6/5/2018 9:47:12 AM	R51746
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.034	0.00099	0.0020		mg/L	1	5/31/2018 3:57:16 PM	A51646
Cadmium	ND	0.0010	0.0020		mg/L	1	5/23/2018 7:51:35 PM	E51452
Calcium	2.1	0.078	1.0		mg/L	1	5/23/2018 7:51:35 PM	E51452
Chromium	0.0013	0.0013	0.0060	J	mg/L	1	5/31/2018 3:57:16 PM	A51646
Copper	ND	0.0032	0.0060		mg/L	1	5/31/2018 3:57:16 PM	A51646
Iron	ND	0.016	0.020		mg/L	1	5/31/2018 3:57:16 PM	A51646
Magnesium	ND	0.25	1.0		mg/L	1	5/23/2018 7:51:35 PM	E51452
Manganese	0.0044	0.00039	0.0020		mg/L	1	5/31/2018 3:57:16 PM	A51646
Potassium	0.69	0.11	1.0	J	mg/L	1	5/23/2018 7:51:35 PM	E51452
Silver	ND	0.0018	0.0050		mg/L	1	5/24/2018 8:21:38 PM	A51516
Sodium	320	1.6	10		mg/L	10	5/23/2018 7:53:34 PM	E51452
Zinc	0.0062	0.0021	0.010	J	mg/L	1	5/31/2018 3:57:16 PM	A51646
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.061	0.0010	0.0020		mg/L	1	5/24/2018 4:44:48 PM	38259
Cadmium	ND	0.00058	0.0020		mg/L	1	5/24/2018 4:44:48 PM	38259
Chromium	0.0076	0.0018	0.0060		mg/L	1	5/24/2018 4:44:48 PM	38259
Copper	0.051	0.0041	0.0060		mg/L	1	5/24/2018 4:44:48 PM	38259
Iron	1.8	0.051	0.10	*	mg/L	5	6/4/2018 4:29:42 PM	38388
Manganese	0.093	0.0011	0.0020	*	mg/L	1	5/24/2018 4:44:48 PM	38259
Silver	ND	0.0012	0.0050		mg/L	1	5/24/2018 4:44:48 PM	38259
Zinc	0.023	0.0033	0.010		mg/L	1	5/24/2018 4:44:48 PM	38259
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00073	0.00042	0.0010	J	mg/L	1	5/21/2018 4:15:31 PM	B51420
Lead	ND	0.00017	0.00050		mg/L	1	5/21/2018 4:15:31 PM	B51420

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018
Lab ID: 1805972-006
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Selenium	0.0022	0.00076	0.0010		mg/L	1	5/21/2018 4:15:31 PM	B51420
Uranium	0.034	0.00048	0.0025	*	mg/L	5	5/23/2018 2:56:59 PM	B51469
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	5/23/2018 5:45:20 PM	38259
Lead	0.0020	0.00023	0.00050		mg/L	1	5/23/2018 5:45:20 PM	38259
Selenium	0.0023	0.00098	0.0010		mg/L	1	5/23/2018 5:45:20 PM	38259
Uranium	0.036	0.00034	0.0025	*	mg/L	5	6/1/2018 4:08:44 PM	38259
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000037	0.00020	J	mg/L	1	5/23/2018 12:33:11 PM	38266
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Methyl tert-butyl ether (MTBE)	2.1	0.24	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Acetone	1.6	0.82	10	J	µg/L	1	5/21/2018 6:20:59 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 6:20:59 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 6:20:59 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018
Lab ID: 1805972-006
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 6:20:59 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 6:20:59 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 6:20:59 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 6:20:59 PM	W5141
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	5/21/2018 6:20:59 PM	W5141
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	5/21/2018 6:20:59 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date: 5/15/2018
Lab ID: 1805972-006
Matrix: AQUEOUS
Received Date: 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	5/21/2018 6:20:59 PM	W5141
Surr: Toluene-d8	101	0	70-130		%Rec	1	5/21/2018 6:20:59 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 1:28:13 PM	R51413
Surr: BFB	111	0	70-130		%Rec	1	5/21/2018 1:28:13 PM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805972-007 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.062	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Toluene	ND	0.064	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Ethylbenzene	ND	0.093	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Naphthalene	ND	0.11	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Acetone	1.7	0.82	10	J	µg/L	1	5/21/2018 6:50:11 PM	W5141
Bromobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Bromodichloromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Bromoform	ND	0.21	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Bromomethane	ND	0.26	3.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
2-Butanone	ND	1.1	10		µg/L	1	5/21/2018 6:50:11 PM	W5141
Carbon disulfide	ND	0.40	10		µg/L	1	5/21/2018 6:50:11 PM	W5141
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Chlorobenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Chloroethane	ND	0.23	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Chloroform	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Chloromethane	ND	0.29	3.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Dibromochloromethane	ND	0.072	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Dibromomethane	ND	0.091	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 2nd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1805972-007 **Matrix:** AQUEOUS **Received Date:** 5/17/2018 9:25:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
2-Hexanone	ND	0.66	10		µg/L	1	5/21/2018 6:50:11 PM	W5141
Isopropylbenzene	ND	0.051	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	5/21/2018 6:50:11 PM	W5141
Methylene Chloride	ND	0.11	3.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
n-Butylbenzene	ND	0.13	3.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
n-Propylbenzene	ND	0.074	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Styrene	ND	0.16	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Vinyl chloride	ND	0.18	1.0		µg/L	1	5/21/2018 6:50:11 PM	W5141
Xylenes, Total	ND	0.32	1.5		µg/L	1	5/21/2018 6:50:11 PM	W5141
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	5/21/2018 6:50:11 PM	W5141
Surr: 4-Bromofluorobenzene	116	0	70-130		%Rec	1	5/21/2018 6:50:11 PM	W5141
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	5/21/2018 6:50:11 PM	W5141
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	5/21/2018 6:50:11 PM	W5141
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	5/21/2018 11:55:40 AM	R51413
Surr: BFB	106	0	70-130		%Rec	1	5/21/2018 11:55:40 AM	R51413

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-E**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**E51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1677321**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID	**LLLCS-E**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**E51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1677322**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Calcium	0.47	1.0	0.5000	0	95.0	50	150			J
Magnesium	0.49	1.0	0.5000	0	97.2	50	150			J
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0040	0.0050	0.005000	0	80.2	50	150			J
Sodium	0.46	1.0	0.5000	0	92.7	50	150			J

Sample ID	**LCS-E**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**E51452**	RunNo:	**51452**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1677323**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.43	0.0020	0.5000	0	85.6	85	115			
Calcium	47	1.0	50.00	0	94.7	85	115			
Magnesium	50	1.0	50.00	0	99.3	85	115			
Potassium	49	1.0	50.00	0	98.7	85	115			
Silver	0.086	0.0050	0.1000	0	86.0	85	115			
Sodium	54	1.0	50.00	0	108	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A51516**	RunNo:	**51516**					
Prep Date:		Analysis Date:	**5/24/2018**	SeqNo:	**1679019**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0048	0.0050	0.005000	0	96.0	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51516**	RunNo: **51516**
Prep Date:	Analysis Date: **5/24/2018**	SeqNo: **1679021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685104** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685105** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Chromium	0.0060	0.0060	0.006000	0	99.7	50	150			J
Copper	0.0052	0.0060	0.006000	0	85.8	50	150			J
Iron	0.019	0.020	0.02000	0	96.4	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Zinc	0.0065	0.010	0.005000	0	131	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685106** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.5	85	115			
Chromium	0.46	0.0060	0.5000	0	92.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51646**	RunNo: **51646**
Prep Date:	Analysis Date: **5/31/2018**	SeqNo: **1685106** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.47	0.0060	0.5000	0	93.3	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	94.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB-38259**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **38259**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-38259**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **38259**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0073	0.0060	0.006000	0	122	50	150			
Manganese	0.0023	0.0020	0.002000	0	114	50	150			
Silver	0.0050	0.0050	0.005000	0	101	50	150			
Zinc	0.0068	0.010	0.005000	0	136	50	150			J

Sample ID **LCS-38259**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **38259**	RunNo: **51516**
Prep Date: **5/22/2018**	Analysis Date: **5/24/2018**	SeqNo: **1679033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.5	85	115			
Chromium	0.49	0.0060	0.5000	0	98.2	85	115			
Copper	0.50	0.0060	0.5000	0	99.8	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**LLLCS-38259**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**38259**		RunNo:	**51516**				
Prep Date:	**5/22/2018**	Analysis Date:	**5/24/2018**		SeqNo:	**1679073**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.033	0.020	0.02000	0	164	50	150			S

Sample ID	**MB-38388**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**38388**		RunNo:	**51699**				
Prep Date:	**5/30/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1688465**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-38388**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**38388**		RunNo:	**51699**				
Prep Date:	**5/30/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1688466**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.018	0.020	0.02000	0	90.5	50	150			J

Sample ID	**LCS-38388**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**38388**		RunNo:	**51699**				
Prep Date:	**5/30/2018**	Analysis Date:	**6/4/2018**		SeqNo:	**1688467**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.48	0.020	0.5000	0	96.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673324** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673325** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00047	0.00050	0.0005000	0	93.8	50	150			J
Selenium	0.00094	0.0010	0.001000	0	94.5	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	91.9	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.7	85	115			
Lead	0.011	0.00050	0.01250	0	92.0	85	115			
Selenium	0.023	0.0010	0.02500	0	91.2	85	115			
Uranium	0.012	0.00050	0.01250	0	92.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673355** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51420**	RunNo: **51420**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B51420**	RunNo:	**51420**					
Prep Date:		Analysis Date:	**5/21/2018**	SeqNo:	**1673356**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	93.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.1	50	150			J
Selenium	0.00081	0.0010	0.001000	0	81.3	50	150			J
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B51420**	RunNo:	**51420**					
Prep Date:		Analysis Date:	**5/21/2018**	SeqNo:	**1673357**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.8	85	115			
Lead	0.011	0.00050	0.01250	0	91.8	85	115			
Selenium	0.023	0.0010	0.02500	0	90.9	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID	**1805972-006EMS**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**DUP12**	Batch ID:	**B51420**	RunNo:	**51420**					
Prep Date:		Analysis Date:	**5/21/2018**	SeqNo:	**1673363**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.0007305	105	70	130			
Lead	0.0093	0.00050	0.01250	0	74.2	70	130			
Selenium	0.028	0.0010	0.02500	0.002245	103	70	130			

Sample ID	**1805972-006EMSD**	SampType:	**MSD**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**DUP12**	Batch ID:	**B51420**	RunNo:	**51420**					
Prep Date:		Analysis Date:	**5/21/2018**	SeqNo:	**1673364**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.028	0.0010	0.02500	0.0007305	107	70	130	1.93	20	
Lead	0.0095	0.00050	0.01250	0	76.3	70	130	2.69	20	
Selenium	0.028	0.0010	0.02500	0.002245	105	70	130	0.935	20	

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B51469**	RunNo:	**51469**					
Prep Date:		Analysis Date:	**5/23/2018**	SeqNo:	**1676206**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B51469**	RunNo: **51469**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B51469**	RunNo: **51469**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	99.7	50	150			J
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.0010	0.0010	0.001000	0	103	50	150			
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B51469**	RunNo: **51469**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.4	85	115			
Lead	0.012	0.00050	0.01250	0	97.0	85	115			
Selenium	0.024	0.0010	0.02500	0	96.8	85	115			
Uranium	0.012	0.00050	0.01250	0	99.5	85	115			

Sample ID **1805972-006EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **DUP12**	Batch ID: **B51469**	RunNo: **51469**
Prep Date:	Analysis Date: **5/23/2018**	SeqNo: **1676622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.093	0.0025	0.06250	0.03351	95.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38259**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677168**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-38259**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677170**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			
Lead	0.00054	0.00050	0.0005000	0	107	50	150			
Selenium	0.0010	0.0010	0.001000	0	101	50	150			
Uranium	0.00052	0.00050	0.0005000	0	104	50	150			

Sample ID	**MSLCS-38259**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677172**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.013	0.00050	0.01250	0	105	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Uranium	0.013	0.00050	0.01250	0	107	85	115			

Sample ID	**1805972-001FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB13**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677177**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	70	130			
Lead	0.012	0.00050	0.01250	0	97.5	70	130			
Selenium	0.024	0.0010	0.02500	0	94.8	70	130			
Uranium	0.013	0.00050	0.01250	0	105	70	130			

Sample ID	**1805972-001FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB13**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677178**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**1805972-001FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB13**	Batch ID:	**38259**	RunNo:	**51489**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1677178**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.9	70	130	1.73	20	
Lead	0.012	0.00050	0.01250	0	94.7	70	130	2.96	20	
Selenium	0.023	0.0010	0.02500	0	93.2	70	130	1.69	20	
Uranium	0.012	0.00050	0.01250	0	99.8	70	130	5.02	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38266**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**38266**	RunNo:	**51468**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1676065**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000085	0.00020								J

Sample ID	**LCS-38266**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**38266**	RunNo:	**51468**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1676066**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.8	80	120			

Sample ID	**1805972-006FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**DUP12**	Batch ID:	**38266**	RunNo:	**51468**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1676090**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0060	0.00020	0.005000	0.0001093	119	75	125			

Sample ID	**1805972-006FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**DUP12**	Batch ID:	**38266**	RunNo:	**51468**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/23/2018**	SeqNo:	**1676091**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0061	0.00020	0.005000	0.0001093	120	75	125	1.17	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**
15-Jun-18

Client: Andeavor Gallup
Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51607**	RunNo: **51607**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682302** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.22	0.50								J
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.19	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS-b**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51607**	RunNo: **51607**
Prep Date:	Analysis Date: **5/29/2018**	SeqNo: **1682305** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.4	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Bromide	2.4	0.10	2.500	0	95.5	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.0	90	110			
Sulfate	9.2	0.50	10.00	0	92.0	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R51746**	RunNo: **51746**
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1689096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R51746**	RunNo: **51746**
Prep Date:	Analysis Date: **6/4/2018**	SeqNo: **1689097** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**MB-38219**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1674912**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-38219**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**38219**	RunNo:	**51444**					
Prep Date:	**5/22/2018**	Analysis Date:	**5/22/2018**	SeqNo:	**1675515**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.071	0.010	0.1000	0	71.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **LCS-38276**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **38276**	RunNo: **51394**
Prep Date: **5/23/2018**	Analysis Date: **5/23/2018**	SeqNo: **1675928** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	107	70	130			
Surr: DNOP	0.49		0.5000		97.1	76.7	135			

Sample ID **MB-38276**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **38276**	RunNo: **51394**
Prep Date: **5/23/2018**	Analysis Date: **5/23/2018**	SeqNo: **1675929** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	76.7	135			

Sample ID **1805972-001CMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB13**	Batch ID: **38276**	RunNo: **51394**
Prep Date: **5/23/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	104	82.8	143			
Surr: DNOP	0.48		0.5000		97.0	76.7	135			

Sample ID **1805972-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB13**	Batch ID: **38276**	RunNo: **51394**
Prep Date: **5/23/2018**	Analysis Date: **5/23/2018**	SeqNo: **1676953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	101	82.8	143	2.51	20	
Surr: DNOP	0.49		0.5000		97.1	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	1.9	10								J
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	0.18	1.0								J
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.34	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.8	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	9.9		10.00		99.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W51418**	RunNo: **51418**
Prep Date:	Analysis Date: **5/21/2018**	SeqNo: **1673283** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805972**

15-Jun-18

Client: Andeavor Gallup

Project: 2nd Quarter 2018 Groundwater Sampling OW

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R51413**		RunNo:	**51413**					
Prep Date:		Analysis Date:	**5/21/2018**		SeqNo:	**1673176**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.49	0.050	0.5000	0	98.0	70	130			
Surr: BFB		9.9		10.00		99.1	70	130			

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R51413**		RunNo:	**51413**					
Prep Date:		Analysis Date:	**5/21/2018**		SeqNo:	**1673177**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		11		10.00		108	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1805972 | RcptNo: 1

Received By: **Isaiah Ortiz** 5/17/2018 9:25:00 AM IO

Completed By: **Ashley Gallegos** 5/17/2018 10:36:20 AM AG

Reviewed By:

LB: IMO 5/17/18 Labeled by: IMO

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 16 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? No
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2 0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/15/18	0845	H_2O	FB13	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700		Courier		
			JCA	5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☒ Yes~~ ☐ No

Sample Temperature: 1.2 0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/15/18	0920	H_2O	OW-1	40ml VOA-5	HCl	-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700		Courier		
				5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☑ Yes~~ ☐ No

Sample Temperature: 1.2 0.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/15/18	1125	H_2O	OW-10	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700			5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☒~~ Yes ☐ No

Sample Temperature: 1.2 0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
5/15/18	1410	H_2O	OW-13	40ml VOA-5	HCl	-004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700			5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) EXCEL

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2 0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972
5/15/18	1525	H_2O	OW-14	40ml VOA-5	HCl	-005
				40ml VOA-3	$Na_2S_2O_3$	
				250 ml Amber-1	Neat	
				250 ml Plastic-1	HNO_3	
				125 ml Plastic-1	HNO_3	

Analysis Request

BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	**EDB (Method 8011)**	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	**WQCC Metals(Total & Dissolved)**				Air Bubbles (Y or N)
		X							X						
				X											
		X													
											X				
											X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700		COURIER	5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-722-0287**

email or Fax#: **Jessica.L.Obrien@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) EXCEL

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **2nd Quarter 2018 Groundwater Sampling (OW)**

Project #:

Project Manager: **Jessica O'Brien**

Sampler: **Tracy Payne**

On Ice: ~~☐~~ Yes ☐ No

Sample Temperature: 1.2 0.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805972	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
5/15/18	—	H_2O	DUP12	40ml VOA-5	HCl	-006			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
5/15/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCL											X						

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/16/18	0700		COURIER		
				5/17/18	925
Date:	Time:	Relinquished by:	Received by:	Date	Time

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808B32

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/22/2018 2:50:57 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/22/2018 12:10:47 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 12:10:47 AM	39890
Surr: DNOP	114	0	76.7-135		%Rec	1	8/22/2018 12:10:47 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/18/2018 2:23:07 AM	A53556
Chloride	0.28	0.029	0.50	J	mg/L	1	8/18/2018 2:23:07 AM	A53556
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/18/2018 2:23:07 AM	A53556
Bromide	ND	0.027	0.10		mg/L	1	8/18/2018 2:23:07 AM	A53556
Nitrogen, Nitrate (As N)	0.044	0.0066	0.10	J	mg/L	1	8/18/2018 2:23:07 AM	A53556
Phosphorus, Orthophosphate (As P)	0.26	0.093	0.50	J	mg/L	1	8/18/2018 2:23:07 AM	A53556
Sulfate	ND	0.21	0.50		mg/L	1	8/18/2018 2:23:07 AM	A53556
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/5/2018 7:13:49 PM	C53924
Cadmium	ND	0.0010	0.0020		mg/L	1	9/5/2018 7:13:49 PM	C53924
Calcium	ND	0.078	1.0		mg/L	1	9/5/2018 7:13:49 PM	C53924
Chromium	ND	0.0013	0.0060		mg/L	1	9/5/2018 7:13:49 PM	C53924
Copper	0.0037	0.0032	0.0060	J	mg/L	1	9/5/2018 7:13:49 PM	C53924
Iron	ND	0.016	0.020		mg/L	1	9/5/2018 7:13:49 PM	C53924
Magnesium	ND	0.25	1.0		mg/L	1	9/5/2018 7:13:49 PM	C53924
Manganese	0.00066	0.00039	0.0020	J	mg/L	1	9/5/2018 7:13:49 PM	C53924
Potassium	ND	0.11	1.0		mg/L	1	9/5/2018 7:13:49 PM	C53924
Silver	ND	0.0018	0.0050		mg/L	1	9/5/2018 7:13:49 PM	C53924
Sodium	ND	0.16	1.0		mg/L	1	9/5/2018 7:13:49 PM	C53924
Zinc	0.0083	0.0021	0.010	J	mg/L	1	9/5/2018 7:13:49 PM	C53924
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	8/28/2018 5:35:24 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 5:35:24 PM	39911
Chromium	ND	0.0018	0.0060		mg/L	1	8/28/2018 5:35:24 PM	39911
Copper	ND	0.0041	0.0060		mg/L	1	8/28/2018 5:35:24 PM	39911
Iron	ND	0.010	0.020		mg/L	1	8/28/2018 5:35:24 PM	39911
Manganese	ND	0.0011	0.0020		mg/L	1	8/28/2018 5:35:24 PM	39911
Silver	ND	0.0012	0.0050		mg/L	1	8/28/2018 5:35:24 PM	39911
Zinc	ND	0.0033	0.010		mg/L	1	8/28/2018 5:35:24 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/23/2018 11:50:41 AM	C53656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	ND	0.00017	0.00050		mg/L	1	8/23/2018 11:50:41 AM	C53656
Selenium	ND	0.00076	0.0010		mg/L	1	8/23/2018 11:50:41 AM	C53656
Uranium	ND	0.000096	0.00050		mg/L	1	8/23/2018 11:50:41 AM	C53656
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/24/2018 8:52:46 AM	39911
Lead	ND	0.00023	0.00050		mg/L	1	8/24/2018 8:52:46 AM	39911
Selenium	ND	0.00098	0.0010		mg/L	1	8/24/2018 8:52:46 AM	39911
Uranium	ND	0.000068	0.00050		mg/L	1	8/24/2018 8:52:46 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000071	0.000038	0.00020	J	mg/L	1	9/7/2018 3:02:19 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Benzoic acid	6.8	6.3	20	J	µg/L	1	8/24/2018 4:26:42 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Diethyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 4:26:42 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 4:26:42 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 4:26:42 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 4:26:42 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 4:26:42 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Phenol	ND	6.0	10		µg/L	1	8/24/2018 4:26:42 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 4:26:42 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 4:26:42 PM	39925
Surr: 2-Fluorophenol	47.2	0	15-74.1		%Rec	1	8/24/2018 4:26:42 PM	39925
Surr: Phenol-d5	38.2	0	15-59.8		%Rec	1	8/24/2018 4:26:42 PM	39925
Surr: 2,4,6-Tribromophenol	64.4	0	22.1-112		%Rec	1	8/24/2018 4:26:42 PM	39925
Surr: Nitrobenzene-d5	62.9	0	33.2-94		%Rec	1	8/24/2018 4:26:42 PM	39925
Surr: 2-Fluorobiphenyl	59.8	0	34-90.9		%Rec	1	8/24/2018 4:26:42 PM	39925
Surr: 4-Terphenyl-d14	73.8	0	15-149		%Rec	1	8/24/2018 4:26:42 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Toluene	0.43	0.17	1.0	J	µg/L	1	8/20/2018 12:47:26 PM	W5357
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Naphthalene	ND	0.29	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 12:47:26 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 12:47:26 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 12:47:26 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Chloroform	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 12:47:26 PM	W5357
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 12:47:26 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 12:47:26 PM	W5357
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/20/2018 12:47:26 PM	W5357
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/20/2018 12:47:26 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:00:00 AM
Lab ID: 1808B32-001
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	8/20/2018 12:47:26 PM	W5357
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	8/20/2018 12:47:26 PM	W5357
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	8/20/2018 12:47:26 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.026	0.0097	0.050	J	mg/L	1	8/20/2018 12:47:26 PM	G53574
Surr: BFB	95.2	0	70-130		%Rec	1	8/20/2018 12:47:26 PM	G53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/22/2018 3:36:20 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/22/2018 12:32:44 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 12:32:44 AM	39890
Surr: DNOP	112	0	76.7-135		%Rec	1	8/22/2018 12:32:44 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/18/2018 4:38:40 AM	A53554
Chloride	0.15	0.029	0.50	J	mg/L	1	8/18/2018 4:38:40 AM	A53554
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/18/2018 4:38:40 AM	A53554
Bromide	ND	0.027	0.10		mg/L	1	8/18/2018 4:38:40 AM	A53554
Nitrogen, Nitrate (As N)	0.066	0.0066	0.10	J	mg/L	1	8/18/2018 4:38:40 AM	A53554
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/18/2018 4:38:40 AM	A53554
Sulfate	ND	0.21	0.50		mg/L	1	8/18/2018 4:38:40 AM	A53554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/5/2018 7:18:14 PM	C53924
Cadmium	ND	0.0010	0.0020		mg/L	1	9/5/2018 7:18:14 PM	C53924
Calcium	ND	0.078	1.0		mg/L	1	9/5/2018 7:18:14 PM	C53924
Chromium	ND	0.0013	0.0060		mg/L	1	9/5/2018 7:18:14 PM	C53924
Copper	0.0039	0.0032	0.0060	J	mg/L	1	9/5/2018 7:18:14 PM	C53924
Iron	ND	0.016	0.020		mg/L	1	9/5/2018 7:18:14 PM	C53924
Magnesium	ND	0.25	1.0		mg/L	1	9/5/2018 7:18:14 PM	C53924
Manganese	ND	0.00039	0.0020		mg/L	1	9/5/2018 7:18:14 PM	C53924
Potassium	ND	0.11	1.0		mg/L	1	9/5/2018 7:18:14 PM	C53924
Silver	ND	0.0018	0.0050		mg/L	1	9/5/2018 7:18:14 PM	C53924
Sodium	0.27	0.16	1.0	J	mg/L	1	9/5/2018 7:18:14 PM	C53924
Zinc	0.0089	0.0021	0.010	J	mg/L	1	9/5/2018 7:18:14 PM	C53924
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	8/28/2018 5:41:52 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 5:41:52 PM	39911
Chromium	ND	0.0018	0.0060		mg/L	1	8/28/2018 5:41:52 PM	39911
Copper	ND	0.0041	0.0060		mg/L	1	8/28/2018 5:41:52 PM	39911
Iron	ND	0.010	0.020		mg/L	1	8/28/2018 5:41:52 PM	39911
Manganese	ND	0.0011	0.0020		mg/L	1	8/28/2018 5:41:52 PM	39911
Silver	ND	0.0012	0.0050		mg/L	1	8/28/2018 5:41:52 PM	39911
Zinc	ND	0.0033	0.010		mg/L	1	8/28/2018 5:41:52 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/23/2018 11:53:03 AM	C53656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	ND	0.00017	0.00050		mg/L	1	8/23/2018 11:53:03 AM	C53656
Selenium	ND	0.00076	0.0010		mg/L	1	8/23/2018 11:53:03 AM	C53656
Uranium	ND	0.000096	0.00050		mg/L	1	8/23/2018 11:53:03 AM	C53656
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/24/2018 8:55:09 AM	39911
Lead	ND	0.00023	0.00050		mg/L	1	8/24/2018 8:55:09 AM	39911
Selenium	ND	0.00098	0.0010		mg/L	1	8/24/2018 8:55:09 AM	39911
Uranium	ND	0.000068	0.00050		mg/L	1	8/24/2018 8:55:09 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000073	0.000038	0.00020	J	mg/L	1	9/7/2018 3:04:35 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Benzoic acid	6.7	6.3	20	J	µg/L	1	8/24/2018 4:56:20 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Diethyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 4:56:20 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 4:56:20 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 4:56:20 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 4:56:20 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 4:56:20 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Phenol	ND	6.0	10		µg/L	1	8/24/2018 4:56:20 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 4:56:20 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 4:56:20 PM	39925
Surr: 2-Fluorophenol	50.9	0	15-74.1		%Rec	1	8/24/2018 4:56:20 PM	39925
Surr: Phenol-d5	39.8	0	15-59.8		%Rec	1	8/24/2018 4:56:20 PM	39925
Surr: 2,4,6-Tribromophenol	62.3	0	22.1-112		%Rec	1	8/24/2018 4:56:20 PM	39925
Surr: Nitrobenzene-d5	73.0	0	33.2-94		%Rec	1	8/24/2018 4:56:20 PM	39925
Surr: 2-Fluorobiphenyl	65.2	0	34-90.9		%Rec	1	8/24/2018 4:56:20 PM	39925
Surr: 4-Terphenyl-d14	73.2	0	15-149		%Rec	1	8/24/2018 4:56:20 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Toluene	0.40	0.17	1.0	J	µg/L	1	8/20/2018 1:16:35 PM	W5357
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Naphthalene	ND	0.29	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 1:16:35 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 1:16:35 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 1:16:35 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Chloroform	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 1:16:35 PM	W5357
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 1:16:35 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 1:16:35 PM	W5357
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/20/2018 1:16:35 PM	W5357
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/20/2018 1:16:35 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 9:20:00 AM
Lab ID: 1808B32-002
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/20/2018 1:16:35 PM	W5357
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	8/20/2018 1:16:35 PM	W5357
Surr: Toluene-d8	101	0	70-130		%Rec	1	8/20/2018 1:16:35 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.018	0.0097	0.050	J	mg/L	1	8/20/2018 1:16:35 PM	G53574
Surr: BFB	96.0	0	70-130		%Rec	1	8/20/2018 1:16:35 PM	G53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0092		µg/L	1	8/22/2018 3:51:32 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.0	0.63	1.0		mg/L	1	8/22/2018 12:54:41 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 12:54:41 AM	39890
Surr: DNOP	119	0	76.7-135		%Rec	1	8/22/2018 12:54:41 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	8/18/2018 5:03:30 AM	A53554
Chloride	540	1.5	25		mg/L	50	8/30/2018 12:17:10 PM	R53849
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/18/2018 5:03:30 AM	A53554
Bromide	1.1	0.13	0.50		mg/L	5	8/18/2018 5:03:30 AM	A53554
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/18/2018 5:03:30 AM	A53554
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/18/2018 5:03:30 AM	A53554
Sulfate	23	1.0	2.5		mg/L	5	8/18/2018 5:03:30 AM	A53554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.33	0.00099	0.0020		mg/L	1	9/5/2018 7:33:20 PM	C53924
Cadmium	ND	0.0010	0.0020		mg/L	1	9/5/2018 7:33:20 PM	C53924
Calcium	100	0.39	5.0		mg/L	5	9/5/2018 7:45:57 PM	C53924
Chromium	ND	0.0013	0.0060		mg/L	1	9/5/2018 7:33:20 PM	C53924
Copper	0.0051	0.0032	0.0060	J	mg/L	1	9/5/2018 7:33:20 PM	C53924
Iron	0.97	0.082	0.10	*	mg/L	5	9/5/2018 7:45:57 PM	C53924
Magnesium	18	0.25	1.0		mg/L	1	9/5/2018 7:33:20 PM	C53924
Manganese	2.4	0.0020	0.010	*	mg/L	5	9/5/2018 7:45:57 PM	C53924
Potassium	1.0	0.11	1.0		mg/L	1	9/5/2018 7:33:20 PM	C53924
Silver	0.0033	0.0018	0.0050	J	mg/L	1	9/5/2018 7:33:20 PM	C53924
Sodium	500	1.6	10		mg/L	10	9/5/2018 7:51:51 PM	C53924
Zinc	0.0075	0.0021	0.010	J	mg/L	1	9/5/2018 7:33:20 PM	C53924
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.48	0.0010	0.0020		mg/L	1	8/28/2018 5:48:21 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 5:48:21 PM	39911
Chromium	0.0033	0.0018	0.0060	J	mg/L	1	8/28/2018 5:48:21 PM	39911
Copper	0.011	0.0041	0.0060		mg/L	1	8/28/2018 5:48:21 PM	39911
Iron	12	0.20	0.40	*	mg/L	20	9/6/2018 7:10:36 PM	39911
Manganese	3.0	0.0055	0.010	*	mg/L	5	8/28/2018 6:46:05 PM	39911
Silver	0.0023	0.0012	0.0050	J	mg/L	1	8/28/2018 5:48:21 PM	39911
Zinc	0.013	0.0033	0.010		mg/L	1	8/28/2018 5:48:21 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0052	0.00042	0.0010		mg/L	1	8/23/2018 11:55:26 AM	C53656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	0.00025	0.00017	0.00050	J	mg/L	1	8/23/2018 11:55:26 AM	C53656
Selenium	ND	0.00076	0.0010		mg/L	1	8/23/2018 11:55:26 AM	C53656
Uranium	0.027	0.00048	0.0025		mg/L	5	8/27/2018 9:23:27 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0055	0.0021	0.0050		mg/L	5	8/24/2018 8:59:55 AM	39911
Lead	0.0063	0.0011	0.0025		mg/L	5	8/24/2018 8:59:55 AM	39911
Selenium	ND	0.0049	0.0050		mg/L	5	8/24/2018 8:59:55 AM	39911
Uranium	0.029	0.00034	0.0025		mg/L	5	8/28/2018 8:57:55 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000049	0.000038	0.00020	J	mg/L	1	9/7/2018 3:11:29 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Benzoic acid	9.9	6.3	20	J	µg/L	1	8/24/2018 5:25:54 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Diethyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 5:25:54 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 5:25:54 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 5:25:54 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 5:25:54 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 5:25:54 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Phenol	23	6.0	10		µg/L	1	8/24/2018 5:25:54 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 5:25:54 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 5:25:54 PM	39925
Surr: 2-Fluorophenol	36.4	0	15-74.1		%Rec	1	8/24/2018 5:25:54 PM	39925
Surr: Phenol-d5	32.0	0	15-59.8		%Rec	1	8/24/2018 5:25:54 PM	39925
Surr: 2,4,6-Tribromophenol	58.5	0	22.1-112		%Rec	1	8/24/2018 5:25:54 PM	39925
Surr: Nitrobenzene-d5	49.3	0	33.2-94		%Rec	1	8/24/2018 5:25:54 PM	39925
Surr: 2-Fluorobiphenyl	50.8	0	34-90.9		%Rec	1	8/24/2018 5:25:54 PM	39925
Surr: 4-Terphenyl-d14	69.9	0	15-149		%Rec	1	8/24/2018 5:25:54 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	4500	17	100		µg/L	100	8/20/2018 3:13:50 PM	W5357
Toluene	17	1.7	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Ethylbenzene	26	2.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Methyl tert-butyl ether (MTBE)	250	3.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2,4-Trimethylbenzene	ND	2.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,3,5-Trimethylbenzene	ND	2.3	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2-Dichloroethane (EDC)	8.5	4.0	10	J	µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Naphthalene	3.3	2.9	20	J	µg/L	10	8/20/2018 3:43:19 PM	W5357
1-Methylnaphthalene	ND	3.4	40		µg/L	10	8/20/2018 3:43:19 PM	W5357
2-Methylnaphthalene	ND	2.4	40		µg/L	10	8/20/2018 3:43:19 PM	W5357
Acetone	ND	7.9	100		µg/L	10	8/20/2018 3:43:19 PM	W5357
Bromobenzene	ND	3.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Bromodichloromethane	ND	2.8	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Bromoform	ND	3.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Bromomethane	ND	2.6	30		µg/L	10	8/20/2018 3:43:19 PM	W5357
2-Butanone	ND	13	100		µg/L	10	8/20/2018 3:43:19 PM	W5357
Carbon disulfide	ND	3.9	100		µg/L	10	8/20/2018 3:43:19 PM	W5357
Carbon Tetrachloride	ND	1.3	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Chlorobenzene	ND	2.9	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Chloroethane	ND	1.6	20		µg/L	10	8/20/2018 3:43:19 PM	W5357
Chloroform	ND	4.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Chloromethane	ND	2.9	30		µg/L	10	8/20/2018 3:43:19 PM	W5357
2-Chlorotoluene	ND	4.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
4-Chlorotoluene	ND	4.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
cis-1,2-DCE	52	3.8	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	8/20/2018 3:43:19 PM	W5357
Dibromochloromethane	ND	2.4	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Dibromomethane	ND	3.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Dichlorodifluoromethane	ND	10	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1-Dichloroethane	140	4.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1-Dichloroethene	49	1.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2-Dichloropropane	ND	1.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,3-Dichloropropane	ND	2.7	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
2,2-Dichloropropane	ND	1.8	20		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Hexachlorobutadiene	ND	8.0	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
2-Hexanone	ND	9.1	100		µg/L	10	8/20/2018 3:43:19 PM	W5357
Isopropylbenzene	35	2.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
4-Isopropyltoluene	ND	2.4	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	8/20/2018 3:43:19 PM	W5357
Methylene Chloride	ND	2.1	30		µg/L	10	8/20/2018 3:43:19 PM	W5357
n-Butylbenzene	12	2.5	30	J	µg/L	10	8/20/2018 3:43:19 PM	W5357
n-Propylbenzene	64	2.4	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
sec-Butylbenzene	5.6	2.0	10	J	µg/L	10	8/20/2018 3:43:19 PM	W5357
Styrene	ND	2.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
tert-Butylbenzene	ND	2.2	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	8/20/2018 3:43:19 PM	W5357
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1,1-Trichloroethane	ND	1.5	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Trichloroethene (TCE)	6.0	2.6	10	J	µg/L	10	8/20/2018 3:43:19 PM	W5357
Trichlorofluoromethane	ND	1.7	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	8/20/2018 3:43:19 PM	W5357
Vinyl chloride	ND	1.1	10		µg/L	10	8/20/2018 3:43:19 PM	W5357
Xylenes, Total	ND	6.4	15		µg/L	10	8/20/2018 3:43:19 PM	W5357
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	10	8/20/2018 3:43:19 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-25
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 10:00:00 AM
Lab ID: 1808B32-003 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	10	8/20/2018 3:43:19 PM	W5357
Surr: Dibromofluoromethane	117	0	70-130		%Rec	10	8/20/2018 3:43:19 PM	W5357
Surr: Toluene-d8	107	0	70-130		%Rec	10	8/20/2018 3:43:19 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	17	0.097	0.50		mg/L	10	8/20/2018 3:43:19 PM	G5357
Surr: BFB	103	0	70-130		%Rec	10	8/20/2018 3:43:19 PM	G5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.010	0.0048	0.0093		µg/L	1	8/22/2018 4:06:37 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/22/2018 1:16:41 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 1:16:41 AM	39890
Surr: DNOP	120	0	76.7-135		%Rec	1	8/22/2018 1:16:41 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	8/18/2018 5:28:20 AM	A53554
Chloride	840	1.5	25		mg/L	50	8/30/2018 12:29:34 PM	R53849
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/18/2018 5:28:20 AM	A53554
Bromide	1.3	0.13	0.50		mg/L	5	8/18/2018 5:28:20 AM	A53554
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/18/2018 5:28:20 AM	A53554
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/18/2018 5:28:20 AM	A53554
Sulfate	64	1.0	2.5		mg/L	5	8/18/2018 5:28:20 AM	A53554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.13	0.00099	0.0020		mg/L	1	9/11/2018 2:06:13 PM	B54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 2:06:13 PM	B54078
Calcium	130	0.39	5.0		mg/L	5	9/11/2018 2:08:21 PM	B54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 2:06:13 PM	B54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 2:06:13 PM	B54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 2:06:13 PM	B54078
Magnesium	26	0.25	1.0		mg/L	1	9/11/2018 2:06:13 PM	B54078
Manganese	0.065	0.00039	0.0020	*	mg/L	1	9/11/2018 2:06:13 PM	B54078
Potassium	1.4	0.11	1.0		mg/L	1	9/11/2018 2:06:13 PM	B54078
Silver	0.0035	0.0018	0.0050	J	mg/L	1	9/11/2018 2:06:13 PM	B54078
Sodium	570	1.6	10		mg/L	10	9/11/2018 4:01:14 PM	B54078
Zinc	0.011	0.0021	0.010		mg/L	1	9/11/2018 2:06:13 PM	B54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.15	0.0010	0.0020		mg/L	1	8/28/2018 5:50:21 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 5:50:21 PM	39911
Chromium	ND	0.0018	0.0060		mg/L	1	8/28/2018 5:50:21 PM	39911
Copper	ND	0.0041	0.0060		mg/L	1	8/28/2018 5:50:21 PM	39911
Iron	2.0	0.051	0.10	*	mg/L	5	8/28/2018 6:54:33 PM	39911
Manganese	0.098	0.0011	0.0020	*	mg/L	1	8/28/2018 5:50:21 PM	39911
Silver	0.0033	0.0012	0.0050	J	mg/L	1	8/28/2018 5:50:21 PM	39911
Zinc	0.0048	0.0033	0.010	J	mg/L	1	8/28/2018 5:50:21 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	8/23/2018 12:02:38 PM	C53656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	ND	0.00017	0.00050		mg/L	1	8/23/2018 12:02:38 PM	C53656
Selenium	ND	0.00076	0.0010		mg/L	1	8/23/2018 12:02:38 PM	C53656
Uranium	0.040	0.00048	0.0025	*	mg/L	5	8/27/2018 9:25:50 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	8/24/2018 9:04:41 AM	39911
Lead	ND	0.0011	0.0025		mg/L	5	8/24/2018 9:04:41 AM	39911
Selenium	ND	0.0049	0.0050		mg/L	5	8/24/2018 9:04:41 AM	39911
Uranium	0.038	0.00034	0.0025	*	mg/L	5	8/28/2018 9:00:16 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000067	0.000038	0.00020	J	mg/L	1	9/7/2018 3:13:46 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Benzoic acid	6.5	6.3	20	J	µg/L	1	8/24/2018 6:54:17 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Diethyl phthalate	6.8	6.3	10	J	µg/L	1	8/24/2018 6:54:17 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 6:54:17 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 6:54:17 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 6:54:17 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 6:54:17 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 6:54:17 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Phenol	ND	6.0	10		µg/L	1	8/24/2018 6:54:17 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 6:54:17 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 6:54:17 PM	39925
Surr: 2-Fluorophenol	44.9	0	15-74.1		%Rec	1	8/24/2018 6:54:17 PM	39925
Surr: Phenol-d5	36.6	0	15-59.8		%Rec	1	8/24/2018 6:54:17 PM	39925
Surr: 2,4,6-Tribromophenol	62.2	0	22.1-112		%Rec	1	8/24/2018 6:54:17 PM	39925
Surr: Nitrobenzene-d5	62.6	0	33.2-94		%Rec	1	8/24/2018 6:54:17 PM	39925
Surr: 2-Fluorobiphenyl	64.6	0	34-90.9		%Rec	1	8/24/2018 6:54:17 PM	39925
Surr: 4-Terphenyl-d14	70.0	0	15-149		%Rec	1	8/24/2018 6:54:17 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.73	0.17	1.0	J	µg/L	1	8/20/2018 9:05:56 PM	W5357
Toluene	ND	0.17	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Methyl tert-butyl ether (MTBE)	88	0.32	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2-Dichloroethane (EDC)	26	0.40	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Naphthalene	ND	0.29	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 9:05:56 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 9:05:56 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 9:05:56 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Chloroform	0.44	0.40	1.0	J	µg/L	1	8/20/2018 9:05:56 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
cis-1,2-DCE	1.6	0.38	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1-Dichloroethane	39	0.40	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1-Dichloroethene	73	1.2	10		µg/L	10	8/21/2018 12:01:44 AM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 9:05:56 PM	W5357
Isopropylbenzene	1.2	0.22	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 9:05:56 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
sec-Butylbenzene	0.53	0.20	1.0	J	µg/L	1	8/20/2018 9:05:56 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1,1-Trichloroethane	4.8	0.15	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,1,2-Trichloroethane	2.4	0.23	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Trichloroethene (TCE)	5.1	0.26	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 9:05:56 PM	W5357
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/20/2018 9:05:56 PM	W5357
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	8/20/2018 9:05:56 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-31
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:10:00 AM
Lab ID: 1808B32-004
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	8/20/2018 9:05:56 PM	W5357
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	8/20/2018 9:05:56 PM	W5357
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	8/20/2018 9:05:56 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.22	0.0097	0.050		mg/L	1	8/20/2018 9:05:56 PM	G53574
Surr: BFB	93.3	0	70-130		%Rec	1	8/20/2018 9:05:56 PM	G53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/22/2018 4:21:51 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/22/2018 1:38:31 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 1:38:31 AM	39890
Surr: DNOP	117	0	76.7-135		%Rec	1	8/22/2018 1:38:31 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	8/18/2018 5:53:09 AM	A53554
Chloride	3100	5.9	100		mg/L	200	8/30/2018 12:41:59 PM	R53849
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	8/18/2018 6:05:34 AM	A53554
Bromide	ND	0.13	0.50		mg/L	5	8/18/2018 5:53:09 AM	A53554
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/18/2018 5:53:09 AM	A53554
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/18/2018 5:53:09 AM	A53554
Sulfate	550	4.1	10		mg/L	20	8/18/2018 6:05:34 AM	A53554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.040	0.00099	0.0020		mg/L	1	9/11/2018 2:17:06 PM	B54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 2:17:06 PM	B54078
Calcium	210	0.39	5.0		mg/L	5	9/11/2018 2:19:24 PM	B54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 2:17:06 PM	B54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 2:17:06 PM	B54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 2:17:06 PM	B54078
Magnesium	38	0.25	1.0		mg/L	1	9/11/2018 2:17:06 PM	B54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 2:17:06 PM	B54078
Potassium	4.6	0.11	1.0		mg/L	1	9/11/2018 2:17:06 PM	B54078
Silver	0.0052	0.0018	0.0050		mg/L	1	9/11/2018 2:17:06 PM	B54078
Sodium	2100	8.2	50		mg/L	50	9/11/2018 4:09:53 PM	B54078
Zinc	0.011	0.0021	0.010		mg/L	1	9/11/2018 2:17:06 PM	B54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	8/28/2018 5:58:59 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 5:58:59 PM	39911
Chromium	0.0022	0.0018	0.0060	J	mg/L	1	8/28/2018 5:58:59 PM	39911
Copper	0.0059	0.0041	0.0060	J	mg/L	1	8/28/2018 5:58:59 PM	39911
Iron	3.5	0.051	0.10	*	mg/L	5	8/28/2018 6:56:45 PM	39911
Manganese	0.10	0.0011	0.0020	*	mg/L	1	8/28/2018 5:58:59 PM	39911
Silver	0.0073	0.0012	0.0050		mg/L	1	8/28/2018 5:58:59 PM	39911
Zinc	0.011	0.0033	0.010		mg/L	1	8/28/2018 5:58:59 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0023	0.0021	0.0050	J	mg/L	5	8/27/2018 9:28:15 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	ND	0.00087	0.0025		mg/L	5	8/27/2018 9:28:15 AM	B53710
Selenium	ND	0.0038	0.0050		mg/L	5	8/27/2018 9:28:15 AM	B53710
Uranium	0.053	0.00048	0.0025	*	mg/L	5	8/27/2018 9:28:15 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0034	0.0021	0.0050	J	mg/L	5	8/24/2018 9:11:48 AM	39911
Lead	0.0031	0.0011	0.0025		mg/L	5	8/24/2018 9:11:48 AM	39911
Selenium	ND	0.0049	0.0050		mg/L	5	8/24/2018 9:11:48 AM	39911
Uranium	0.051	0.00034	0.0025	*	mg/L	5	8/28/2018 9:02:36 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000079	0.000038	0.00020	J	mg/L	1	9/7/2018 3:16:03 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Benzoic acid	6.8	6.3	20	J	µg/L	1	8/24/2018 7:23:51 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Diethyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 7:23:51 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 7:23:51 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 7:23:51 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 7:23:51 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 7:23:51 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Phenol	ND	6.0	10		µg/L	1	8/24/2018 7:23:51 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 7:23:51 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 7:23:51 PM	39925
Surr: 2-Fluorophenol	39.3	0	15-74.1		%Rec	1	8/24/2018 7:23:51 PM	39925
Surr: Phenol-d5	33.7	0	15-59.8		%Rec	1	8/24/2018 7:23:51 PM	39925
Surr: 2,4,6-Tribromophenol	54.1	0	22.1-112		%Rec	1	8/24/2018 7:23:51 PM	39925
Surr: Nitrobenzene-d5	55.5	0	33.2-94		%Rec	1	8/24/2018 7:23:51 PM	39925
Surr: 2-Fluorobiphenyl	53.4	0	34-90.9		%Rec	1	8/24/2018 7:23:51 PM	39925
Surr: 4-Terphenyl-d14	65.5	0	15-149		%Rec	1	8/24/2018 7:23:51 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Toluene	ND	0.17	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Naphthalene	ND	0.29	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 1:45:45 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 1:45:45 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 1:45:45 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Chloroform	ND	0.40	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1-Dichloroethane	0.82	0.40	1.0	J	µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 1:45:45 PM	W5357
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 1:45:45 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 1:45:45 PM	W5357
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/20/2018 1:45:45 PM	W5357
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	8/20/2018 1:45:45 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-40
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018 11:45:00 AM
Lab ID: 1808B32-005 **Matrix:** AQUEOUS **Received Date:** 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	8/20/2018 1:45:45 PM	W5357
Surr: Dibromofluoromethane	115	0	70-130		%Rec	1	8/20/2018 1:45:45 PM	W5357
Surr: Toluene-d8	99.0	0	70-130		%Rec	1	8/20/2018 1:45:45 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.019	0.0097	0.050	J	mg/L	1	8/20/2018 1:45:45 PM	G53574
Surr: BFB	98.8	0	70-130		%Rec	1	8/20/2018 1:45:45 PM	G53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/22/2018 4:37:05 PM	39914
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.1	0.63	1.0		mg/L	1	8/22/2018 2:00:34 AM	39890
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/22/2018 2:00:34 AM	39890
Surr: DNOP	119	0	76.7-135		%Rec	1	8/22/2018 2:00:34 AM	39890
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	8/18/2018 6:42:49 AM	A53554
Chloride	540	1.5	25		mg/L	50	8/30/2018 12:54:23 PM	R53849
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/18/2018 6:42:49 AM	A53554
Bromide	1.1	0.13	0.50		mg/L	5	8/18/2018 6:42:49 AM	A53554
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/18/2018 6:42:49 AM	A53554
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/18/2018 6:42:49 AM	A53554
Sulfate	23	1.0	2.5		mg/L	5	8/18/2018 6:42:49 AM	A53554
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.31	0.00099	0.0020		mg/L	1	9/11/2018 2:21:31 PM	B54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 2:21:31 PM	B54078
Calcium	100	0.39	5.0		mg/L	5	9/11/2018 2:23:30 PM	B54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 2:21:31 PM	B54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 2:21:31 PM	B54078
Iron	0.92	0.016	0.020	*	mg/L	1	9/11/2018 2:21:31 PM	B54078
Magnesium	18	0.25	1.0		mg/L	1	9/11/2018 2:21:31 PM	B54078
Manganese	2.5	0.0020	0.010	*	mg/L	5	9/11/2018 2:23:30 PM	B54078
Potassium	1.0	0.11	1.0		mg/L	1	9/11/2018 2:21:31 PM	B54078
Silver	0.0027	0.0018	0.0050	J	mg/L	1	9/11/2018 2:21:31 PM	B54078
Sodium	600	1.6	10		mg/L	10	9/11/2018 4:12:08 PM	B54078
Zinc	0.0065	0.0021	0.010	J	mg/L	1	9/11/2018 2:21:31 PM	B54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.45	0.0010	0.0020		mg/L	1	8/28/2018 6:01:04 PM	39911
Cadmium	ND	0.00058	0.0020		mg/L	1	8/28/2018 6:01:04 PM	39911
Chromium	0.0047	0.0018	0.0060	J	mg/L	1	8/28/2018 6:01:04 PM	39911
Copper	0.011	0.0041	0.0060		mg/L	1	8/28/2018 6:01:04 PM	39911
Iron	8.2	0.10	0.20	*	mg/L	10	8/28/2018 6:58:46 PM	39911
Manganese	3.1	0.011	0.020	*	mg/L	10	8/28/2018 6:58:46 PM	39911
Silver	0.0021	0.0012	0.0050	J	mg/L	1	8/28/2018 6:01:04 PM	39911
Zinc	0.013	0.0033	0.010		mg/L	1	8/28/2018 6:01:04 PM	39911
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0052	0.00042	0.0010		mg/L	1	8/23/2018 12:07:26 PM	C53656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	0.00018	0.00017	0.00050	J	mg/L	1	8/23/2018 12:07:26 PM	C53656
Selenium	ND	0.00076	0.0010		mg/L	1	8/23/2018 12:07:26 PM	C53656
Uranium	0.027	0.00048	0.0025		mg/L	5	8/27/2018 9:33:00 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0054	0.0021	0.0050		mg/L	5	8/24/2018 9:18:56 AM	39911
Lead	0.0060	0.0011	0.0025		mg/L	5	8/24/2018 9:18:56 AM	39911
Selenium	ND	0.0049	0.0050		mg/L	5	8/24/2018 9:18:56 AM	39911
Uranium	0.029	0.00034	0.0025		mg/L	5	8/28/2018 9:05:00 AM	39911
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000053	0.000038	0.00020	J	mg/L	1	9/7/2018 3:18:21 PM	40198
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Acenaphthylene	ND	6.2	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Aniline	ND	6.2	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Anthracene	ND	5.7	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Azobenzene	ND	6.7	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Benzoic acid	11	6.3	20	J	µg/L	1	8/24/2018 7:53:15 PM	39925
Benzyl alcohol	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Carbazole	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Chloroaniline	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Chlorophenol	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Chrysene	ND	6.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Dibenzofuran	ND	6.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Diethyl phthalate	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Fluoranthene	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Fluorene	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Hexachloroethane	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Isophorone	ND	6.2	10		µg/L	1	8/24/2018 7:53:15 PM	39925
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Methylphenol	ND	6.3	10		µg/L	1	8/24/2018 7:53:15 PM	39925
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/24/2018 7:53:15 PM	39925
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Naphthalene	ND	5.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Nitroaniline	ND	5.9	10		µg/L	1	8/24/2018 7:53:15 PM	39925
3-Nitroaniline	ND	6.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Nitroaniline	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Nitrobenzene	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2-Nitrophenol	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
4-Nitrophenol	ND	5.6	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Pentachlorophenol	ND	5.3	20		µg/L	1	8/24/2018 7:53:15 PM	39925
Phenanthrene	ND	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Phenol	34	6.0	10		µg/L	1	8/24/2018 7:53:15 PM	39925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Pyridine	ND	5.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/24/2018 7:53:15 PM	39925
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/24/2018 7:53:15 PM	39925
Surr: 2-Fluorophenol	51.6	0	15-74.1		%Rec	1	8/24/2018 7:53:15 PM	39925
Surr: Phenol-d5	41.7	0	15-59.8		%Rec	1	8/24/2018 7:53:15 PM	39925
Surr: 2,4,6-Tribromophenol	64.2	0	22.1-112		%Rec	1	8/24/2018 7:53:15 PM	39925
Surr: Nitrobenzene-d5	74.0	0	33.2-94		%Rec	1	8/24/2018 7:53:15 PM	39925
Surr: 2-Fluorobiphenyl	68.2	0	34-90.9		%Rec	1	8/24/2018 7:53:15 PM	39925
Surr: 4-Terphenyl-d14	71.5	0	15-149		%Rec	1	8/24/2018 7:53:15 PM	39925
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	4500	35	200		µg/L	200	8/20/2018 10:04:38 PM	W5357
Toluene	16	0.17	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Ethylbenzene	26	0.22	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Methyl tert-butyl ether (MTBE)	260	3.2	10		µg/L	10	8/20/2018 5:41:12 PM	W5357
1,2,4-Trimethylbenzene	1.2	0.25	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2-Dichloroethane (EDC)	7.2	0.40	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Naphthalene	4.1	0.29	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1-Methylnaphthalene	3.9	0.34	4.0	J	µg/L	1	8/20/2018 2:15:02 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 2:15:02 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 2:15:02 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 2:15:02 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Chloroform	ND	0.40	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
cis-1,2-DCE	50	0.38	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1-Dichloroethane	140	4.0	10		µg/L	10	8/20/2018 5:41:12 PM	W5357
1,1-Dichloroethene	51	1.2	10		µg/L	10	8/20/2018 5:41:12 PM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 2:15:02 PM	W5357
Isopropylbenzene	37	0.22	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
4-Isopropyltoluene	0.97	0.24	1.0	J	µg/L	1	8/20/2018 2:15:02 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 2:15:02 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
n-Butylbenzene	14	0.25	3.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
n-Propylbenzene	64	0.24	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
sec-Butylbenzene	7.2	0.20	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Tetrachloroethene (PCE)	1.9	0.15	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,1,2-Trichloroethane	0.62	0.23	1.0	J	µg/L	1	8/20/2018 2:15:02 PM	W5357
Trichloroethene (TCE)	6.6	0.26	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 2:15:02 PM	W5357
Xylenes, Total	3.8	0.64	1.5		µg/L	1	8/20/2018 2:15:02 PM	W5357
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	8/20/2018 2:15:02 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP01
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/17/2018
Lab ID: 1808B32-006
Matrix: AQUEOUS
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	8/20/2018 2:15:02 PM	W5357
Surr: Dibromofluoromethane	115	0	70-130		%Rec	1	8/20/2018 2:15:02 PM	W5357
Surr: Toluene-d8	102	0	70-130		%Rec	1	8/20/2018 2:15:02 PM	W5357
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	17	0.097	0.50		mg/L	10	8/20/2018 5:41:12 PM	G53574
Surr: BFB	103	0	70-130		%Rec	10	8/20/2018 5:41:12 PM	G53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808B32-007
Matrix: TRIP BLANK
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Toluene	ND	0.17	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Naphthalene	ND	0.29	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Acetone	ND	0.79	10		µg/L	1	8/20/2018 12:18:17 PM	W5357
Bromobenzene	ND	0.32	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Bromoform	ND	0.32	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Bromomethane	ND	0.26	3.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
2-Butanone	ND	1.3	10		µg/L	1	8/20/2018 12:18:17 PM	W5357
Carbon disulfide	ND	0.39	10		µg/L	1	8/20/2018 12:18:17 PM	W5357
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Chloroethane	ND	0.16	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Chloroform	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Chloromethane	ND	0.29	3.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Dibromomethane	ND	0.32	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808B32-007
Matrix: TRIP BLANK
Received Date: 8/17/2018 2:20:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
2-Hexanone	ND	0.91	10		µg/L	1	8/20/2018 12:18:17 PM	W5357
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/20/2018 12:18:17 PM	W5357
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Styrene	ND	0.25	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/20/2018 12:18:17 PM	W5357
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/20/2018 12:18:17 PM	W5357
Surr: 1,2-Dichloroethane-d4	98.4	0	70-130		%Rec	1	8/20/2018 12:18:17 PM	W5357
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	8/20/2018 12:18:17 PM	W5357
Surr: Dibromofluoromethane	99.6	0	70-130		%Rec	1	8/20/2018 12:18:17 PM	W5357
Surr: Toluene-d8	104	0	70-130		%Rec	1	8/20/2018 12:18:17 PM	W5357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0060	0.0060	0.006000	0	100	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Magnesium	0.51	1.0	0.5000	0	101	50	150			J
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Potassium	0.49	1.0	0.5000	0	98.4	50	150			J
Silver	0.0051	0.0050	0.005000	0	103	50	150			
Sodium	0.49	1.0	0.5000	0	97.0	50	150			J
Zinc	0.0048	0.010	0.005000	0	96.0	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780023** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	51	1.0	50.00	0	102	85	115			
Chromium	0.48	0.0060	0.5000	0	95.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780023** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	95.9	85	115			
Iron	0.53	0.020	0.5000	0	105	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	50	1.0	50.00	0	99.5	85	115			
Silver	0.095	0.0050	0.1000	0	95.4	85	115			
Sodium	51	1.0	50.00	0	102	85	115			
Zinc	0.49	0.010	0.5000	0	98.0	85	115			

Sample ID **1808B32-002FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB01**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780693** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.44	0.0020	0.5000	0	88.5	70	130			
Cadmium	0.45	0.0020	0.5000	0	89.3	70	130			
Calcium	55	1.0	50.00	0	110	70	130			
Chromium	0.42	0.0060	0.5000	0	84.9	70	130			
Copper	0.43	0.0060	0.5000	0.003890	85.5	70	130			
Iron	0.48	0.020	0.5000	0	96.8	70	130			
Magnesium	54	1.0	50.00	0	109	70	130			
Manganese	0.44	0.0020	0.5000	0	87.1	70	130			
Potassium	54	1.0	50.00	0	108	70	130			
Silver	0.091	0.0050	0.1000	0	91.0	70	130			
Sodium	55	1.0	50.00	0.2664	109	70	130			
Zinc	0.44	0.010	0.5000	0.008930	86.2	70	130			

Sample ID **1808B32-002FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EB01**	Batch ID: **C53924**	RunNo: **53924**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.8	70	130	6.94	20	
Cadmium	0.48	0.0020	0.5000	0	95.5	70	130	6.69	20	
Calcium	49	1.0	50.00	0	97.8	70	130	11.3	20	
Chromium	0.45	0.0060	0.5000	0	90.5	70	130	6.42	20	
Copper	0.46	0.0060	0.5000	0.003890	91.5	70	130	6.79	20	
Iron	0.50	0.020	0.5000	0	100	70	130	3.40	20	
Magnesium	48	1.0	50.00	0	96.1	70	130	12.2	20	
Manganese	0.47	0.0020	0.5000	0	93.8	70	130	7.43	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808B32-002FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**EB01**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780694**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	48	1.0	50.00	0	95.2	70	130	12.3	20	
Silver	0.097	0.0050	0.1000	0	96.6	70	130	6.03	20	
Sodium	47	1.0	50.00	0.2664	93.7	70	130	15.4	20	
Zinc	0.47	0.010	0.5000	0.008930	92.6	70	130	7.01	20	

Sample ID	**1808B32-003FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-25**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780703**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.79	0.0020	0.5000	0.3276	92.7	70	130			
Cadmium	0.46	0.0020	0.5000	0	91.6	70	130			
Chromium	0.45	0.0060	0.5000	0	89.4	70	130			
Copper	0.47	0.0060	0.5000	0.005060	92.3	70	130			
Magnesium	64	1.0	50.00	17.73	93.1	70	130			
Potassium	48	1.0	50.00	1.001	93.1	70	130			
Silver	0.083	0.0050	0.1000	0.003280	79.3	70	130			
Zinc	0.48	0.010	0.5000	0.007500	93.7	70	130			

Sample ID	**1808B32-003FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-25**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780704**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.80	0.0020	0.5000	0.3276	94.5	70	130	1.17	20	
Cadmium	0.47	0.0020	0.5000	0	93.0	70	130	1.52	20	
Chromium	0.45	0.0060	0.5000	0	90.4	70	130	1.08	20	
Copper	0.47	0.0060	0.5000	0.005060	93.1	70	130	0.821	20	
Magnesium	63	1.0	50.00	17.73	91.4	70	130	1.31	20	
Potassium	48	1.0	50.00	1.001	93.1	70	130	0.0126	20	
Silver	0.086	0.0050	0.1000	0.003280	83.0	70	130	4.35	20	
Zinc	0.49	0.010	0.5000	0.007500	95.6	70	130	2.05	20	

Sample ID	**1808B32-003FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-25**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780706**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	100.3	97.9	70	130			
Iron	3.4	0.10	2.500	0.9733	96.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808B32-003FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-25**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780706**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	4.7	0.010	2.500	2.396	93.9	70	130			

Sample ID	**1808B32-003FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**MKTF-25**	Batch ID:	**C53924**		RunNo:	**53924**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780707**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	340	5.0	250.0	100.3	96.3	70	130	1.21	20	
Iron	3.4	0.10	2.500	0.9733	97.2	70	130	0.288	20	
Manganese	4.7	0.010	2.500	2.396	93.6	70	130	0.158	20	

Sample ID	**MB-B**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B54078**		RunNo:	**54078**				
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786679**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	**LLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B54078**		RunNo:	**54078**				
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786680**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	91.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Calcium	0.59	1.0	0.5000	0	117	50	150			J
Chromium	0.0052	0.0060	0.006000	0	87.5	50	150			J
Copper	0.0064	0.0060	0.006000	0	107	50	150			
Iron	0.020	0.020	0.02000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B54078**	RunNo:	**54078**
Prep Date:		Analysis Date:	**9/11/2018**	SeqNo:	**1786680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.49	1.0	0.5000	0	98.8	50	150			J
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Potassium	0.54	1.0	0.5000	0	109	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.8	50	150			J
Sodium	0.61	1.0	0.5000	0	122	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B54078**	RunNo:	**54078**
Prep Date:		Analysis Date:	**9/11/2018**	SeqNo:	**1786681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	104	85	115			
Cadmium	0.53	0.0020	0.5000	0	106	85	115			
Calcium	50	1.0	50.00	0	99.3	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.48	0.0020	0.5000	0	96.7	85	115			
Potassium	51	1.0	50.00	0	101	85	115			
Silver	0.11	0.0050	0.1000	0	109	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B54078**	RunNo:	**54078**
Prep Date:		Analysis Date:	**9/11/2018**	SeqNo:	**1786715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0059	0.010	0.005000	0	118	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-39911**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **39911**	RunNo: **53753**
Prep Date: **8/21/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-39911**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **39911**	RunNo: **53753**
Prep Date: **8/21/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Chromium	0.0063	0.0060	0.006000	0	106	50	150			
Copper	0.0060	0.0060	0.006000	0	99.3	50	150			J
Iron	0.016	0.020	0.02000	0	79.9	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0047	0.0050	0.005000	0	94.0	50	150			J
Zinc	0.0064	0.010	0.005000	0	128	50	150			J

Sample ID **LCS-39911**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **39911**	RunNo: **53753**
Prep Date: **8/21/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.4	85	115			
Chromium	0.49	0.0060	0.5000	0	97.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.8	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Silver	0.096	0.0050	0.1000	0	96.1	85	115			
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808B32-001GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB01**	Batch ID:	**39911**		RunNo:	**53753**				
Prep Date:	**8/21/2018**	Analysis Date:	**8/28/2018**		SeqNo:	**1774505**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.9	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.1	70	130			
Chromium	0.47	0.0060	0.5000	0	93.2	70	130			
Copper	0.49	0.0060	0.5000	0	97.5	70	130			
Iron	0.52	0.020	0.5000	0	104	70	130			
Manganese	0.49	0.0020	0.5000	0	98.9	70	130			
Silver	0.094	0.0050	0.1000	0	93.9	70	130			
Zinc	0.48	0.010	0.5000	0	95.4	70	130			

Sample ID	**1808B32-001GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB01**	Batch ID:	**39911**		RunNo:	**53753**				
Prep Date:	**8/21/2018**	Analysis Date:	**8/28/2018**		SeqNo:	**1774506**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	70	130	0.651	20	
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130	0.575	20	
Chromium	0.47	0.0060	0.5000	0	94.1	70	130	0.888	20	
Copper	0.49	0.0060	0.5000	0	97.5	70	130	0.0226	20	
Iron	0.52	0.020	0.5000	0	105	70	130	0.549	20	
Manganese	0.49	0.0020	0.5000	0	97.3	70	130	1.55	20	
Silver	0.095	0.0050	0.1000	0	94.9	70	130	1.08	20	
Zinc	0.48	0.010	0.5000	0	95.9	70	130	0.514	20	

Sample ID	**1808B32-002GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EB01**	Batch ID:	**39911**		RunNo:	**53753**				
Prep Date:	**8/21/2018**	Analysis Date:	**8/28/2018**		SeqNo:	**1774508**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130			
Chromium	0.47	0.0060	0.5000	0	93.6	70	130			
Copper	0.49	0.0060	0.5000	0	97.3	70	130			
Iron	0.52	0.020	0.5000	0	103	70	130			
Manganese	0.48	0.0020	0.5000	0	96.8	70	130			
Silver	0.096	0.0050	0.1000	0	95.6	70	130			
Zinc	0.48	0.010	0.5000	0	95.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808B32-002GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**EB01**	Batch ID:	**39911**	RunNo:	**53753**
Prep Date:	**8/21/2018**	Analysis Date:	**8/28/2018**	SeqNo:	**1774509** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.9	70	130	0.377	20	
Cadmium	0.49	0.0020	0.5000	0	97.3	70	130	0.357	20	
Chromium	0.47	0.0060	0.5000	0	93.3	70	130	0.336	20	
Copper	0.49	0.0060	0.5000	0	98.0	70	130	0.778	20	
Iron	0.52	0.020	0.5000	0	105	70	130	1.44	20	
Manganese	0.49	0.0020	0.5000	0	97.4	70	130	0.645	20	
Silver	0.095	0.0050	0.1000	0	95.2	70	130	0.419	20	
Zinc	0.47	0.010	0.5000	0	94.6	70	130	0.710	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C53656**	RunNo: **53656**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1769294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-C**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C53656**	RunNo: **53656**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1769295** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.0	50	150			J
Selenium	0.00097	0.0010	0.001000	0	97.4	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	103	50	150			

Sample ID **MSLCS-C**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C53656**	RunNo: **53656**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1769296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.026	0.0010	0.02500	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	106	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771843** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B53710**	RunNo:	**53710**
Prep Date:		Analysis Date:	**8/27/2018**	SeqNo:	**1771844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.2	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.1	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.4	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.6	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B53710**	RunNo:	**53710**
Prep Date:		Analysis Date:	**8/27/2018**	SeqNo:	**1771845** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.012	0.00050	0.01250	0	99.2	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-39911**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**39911**	RunNo:	**53684**					
Prep Date:	**8/21/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770858**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-39911**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**39911**	RunNo:	**53684**					
Prep Date:	**8/21/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770859**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	0.00094	0.0010	0.001000	0	93.7	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	98.2	50	150			J

Sample ID	**MSLCS-39911**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**39911**	RunNo:	**53684**					
Prep Date:	**8/21/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.4	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.025	0.0010	0.02500	0	98.7	85	115			
Uranium	0.012	0.00050	0.01250	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40198**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40198**	RunNo:	**53998**					
Prep Date:	**9/6/2018**	Analysis Date:	**9/7/2018**	SeqNo:	**1783436**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000057	0.00020								J

Sample ID	**LCS-40198**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40198**	RunNo:	**53998**					
Prep Date:	**9/6/2018**	Analysis Date:	**9/7/2018**	SeqNo:	**1783438**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A53556**	RunNo: **53556**
Prep Date:	Analysis Date: **8/17/2018**	SeqNo: **1765401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.20	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.27	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53556**	RunNo: **53556**
Prep Date:	Analysis Date: **8/17/2018**	SeqNo: **1765402** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.60	0.10	0.5000	0	120	90	110			S
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.5	90	110			
Bromide	2.4	0.10	2.500	0	94.6	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.2	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	9.1	0.50	10.00	0	90.8	90	110			

Sample ID **1808B32-001EMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01**	Batch ID: **A53556**	RunNo: **53556**
Prep Date:	Analysis Date: **8/18/2018**	SeqNo: **1765444** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0.2753	84.0	77.5	116			
Nitrogen, Nitrite (As N)	0.90	0.10	1.000	0	90.1	82.4	108			
Bromide	2.2	0.10	2.500	0	89.8	80.2	111			
Nitrogen, Nitrate (As N)	2.2	0.10	2.500	0.04415	87.5	79.1	116			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0.2619	87.1	80.7	113			
Sulfate	8.6	0.50	10.00	0	86.1	74.9	123			

Sample ID **1808B32-001EMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01**	Batch ID: **A53556**	RunNo: **53556**
Prep Date:	Analysis Date: **8/18/2018**	SeqNo: **1765445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0.2753	84.6	77.5	116	0.660	20	
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.6	82.4	108	0.511	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808B32-001EMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB01**	Batch ID: **A53556**	RunNo: **53556**
Prep Date:	Analysis Date: **8/18/2018**	SeqNo: **1765445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.3	0.10	2.500	0	90.4	80.2	111	0.690	20	
Nitrogen, Nitrate (As N)	2.2	0.10	2.500	0.04415	88.1	79.1	116	0.695	20	
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0.2619	88.0	80.7	113	0.995	20	
Sulfate	8.7	0.50	10.00	0	86.6	74.9	123	0.614	20	

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A53554**	RunNo: **53554**
Prep Date:	Analysis Date: **8/17/2018**	SeqNo: **1765655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53554**	RunNo: **53554**
Prep Date:	Analysis Date: **8/17/2018**	SeqNo: **1765656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.8	0.50	5.000	0	95.0	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.7	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.3	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	9.4	0.50	10.00	0	93.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53849**	RunNo: **53849**
Prep Date:	Analysis Date: **8/30/2018**	SeqNo: **1776820** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R53849**	RunNo: **53849**							
Prep Date:	Analysis Date: **8/30/2018**	SeqNo: **1776821**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-39914**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**39914**	RunNo:	**53646**					
Prep Date:	**8/22/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1769125**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-39914**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**39914**	RunNo:	**53646**					
Prep Date:	**8/22/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1769126**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	101	70	130			

Sample ID	**1808B32-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB01**	Batch ID:	**39914**	RunNo:	**53646**					
Prep Date:	**8/22/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1769128**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.084	0.0094	0.09363	0	89.3	55	125			

Sample ID	**1808B32-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB01**	Batch ID:	**39914**	RunNo:	**53646**					
Prep Date:	**8/22/2018**	Analysis Date:	**8/22/2018**	SeqNo:	**1769129**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.072	0.0093	0.09304	0	77.0	55	125	15.5	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-39890**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **39890**	RunNo: **53591**
Prep Date: **8/20/2018**	Analysis Date: **8/21/2018**	SeqNo: **1768088** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	110	70	130			
Surr: DNOP	0.55		0.5000		111	76.7	135			

Sample ID **MB-39890**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **39890**	RunNo: **53591**
Prep Date: **8/20/2018**	Analysis Date: **8/21/2018**	SeqNo: **1768089** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		108	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766115** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766115** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766116** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	70	130			
Toluene	19	1.0	20.00	0	97.3	70	130			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766116** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808b32-003dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	55	10	100.0	0	54.9	15	123			
4-Chloro-3-methylphenol	91	10	200.0	0	45.4	26.6	118			
2-Chlorophenol	94	10	200.0	0	47.2	15	120			
1,4-Dichlorobenzene	50	10	100.0	0	50.2	19	108			
2,4-Dinitrotoluene	47	10	100.0	0	47.0	27.8	103			
N-Nitrosodi-n-propylamine	66	10	100.0	0	65.6	32.3	126			
4-Nitrophenol	69	10	200.0	0	34.5	15	72.1			
Pentachlorophenol	100	20	200.0	0	51.8	15	114			
Phenol	45	10	200.0	22.86	11.3	15	67.5			S
Pyrene	57	10	100.0	0	56.5	31.2	112			
1,2,4-Trichlorobenzene	60	10	100.0	0	60.2	22.1	123			
Surr: 2-Fluorophenol	49		200.0		24.7	15	74.1			
Surr: Phenol-d5	32		200.0		16.0	15	59.8			
Surr: 2,4,6-Tribromophenol	100		200.0		51.0	22.1	112			
Surr: Nitrobenzene-d5	58		100.0		58.0	33.2	94			
Surr: 2-Fluorobiphenyl	55		100.0		55.0	34	90.9			
Surr: 4-Terphenyl-d14	56		100.0		56.3	15	149			

Sample ID **1808b32-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	61	10	100.0	0	61.2	15	123	10.9	30.5	
4-Chloro-3-methylphenol	140	10	200.0	0	71.9	26.6	118	45.3	50	
2-Chlorophenol	120	10	200.0	0	61.6	15	120	26.5	36.3	
1,4-Dichlorobenzene	57	10	100.0	0	56.8	19	108	12.4	42.1	
2,4-Dinitrotoluene	55	10	100.0	0	55.1	27.8	103	16.0	28.5	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.6	32.3	126	16.8	25.4	
4-Nitrophenol	64	10	200.0	0	31.9	15	72.1	7.76	50	
Pentachlorophenol	120	20	200.0	0	61.0	15	114	16.3	50	
Phenol	100	10	200.0	22.86	39.9	15	67.5	77.3	46.1	R
Pyrene	71	10	100.0	0	70.6	31.2	112	22.1	34.3	
1,2,4-Trichlorobenzene	66	10	100.0	0	66.0	22.1	123	9.25	43.6	
Surr: 2-Fluorophenol	87		200.0		43.6	15	74.1	0	0	
Surr: Phenol-d5	74		200.0		37.1	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		64.6	22.1	112	0	0	
Surr: Nitrobenzene-d5	62		100.0		61.7	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	61		100.0		60.9	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808b32-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-25**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771435** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	72		100.0		72.1	15	149	0	0	

Sample ID **lcs-39925**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771443** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.2	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	80.9	57	115			
2-Chlorophenol	150	10	200.0	0	77.1	43.4	112			
1,4-Dichlorobenzene	71	10	100.0	0	70.8	38	95.2			
2,4-Dinitrotoluene	63	10	100.0	0	62.8	55.1	96.7			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	55	112			
4-Nitrophenol	140	10	200.0	0	67.9	16.6	93			
Pentachlorophenol	130	20	200.0	0	63.2	43.2	104			
Phenol	130	10	200.0	0	66.0	21.3	85.7			
Pyrene	70	10	100.0	0	69.6	64.9	105			
1,2,4-Trichlorobenzene	74	10	100.0	0	73.9	42.6	107			
Surr: 2-Fluorophenol	140		200.0		72.3	15	74.1			
Surr: Phenol-d5	150		200.0		73.5	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		69.9	22.1	112			
Surr: Nitrobenzene-d5	74		100.0		74.3	33.2	94			
Surr: 2-Fluorobiphenyl	71		100.0		71.4	34	90.9			
Surr: 4-Terphenyl-d14	77		100.0		77.0	15	149			

Sample ID **mb-39925**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771444** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39925**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **39925**	RunNo: **53703**
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771444** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	6.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39925**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **39925**	RunNo: **53703**	
Prep Date: **8/22/2018**	Analysis Date: **8/24/2018**	SeqNo: **1771444**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.5	15	74.1			
Surr: Phenol-d5	120		200.0		59.6	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		63.5	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		68.9	33.2	94			
Surr: 2-Fluorobiphenyl	60		100.0		59.6	34	90.9			
Surr: 4-Terphenyl-d14	73		100.0		72.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808B32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.016	0.050								J
Surr: BFB	9.4		10.00		94.1	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.56	0.050	0.5000	0	112	70	130			
Surr: BFB	10		10.00		103	70	130			

Sample ID **1808b32-003a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-25**	Batch ID: **G53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766272** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	0.50	5.000	16.63	90.9	63.4	130			
Surr: BFB	99		100.0		99.2	70	130			

Sample ID **1808b32-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-25**	Batch ID: **G53574**	RunNo: **53574**
Prep Date:	Analysis Date: **8/20/2018**	SeqNo: **1766273** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	0.50	5.000	16.63	72.2	63.4	130	4.52	20	
Surr: BFB	98		100.0		98.5	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808B32 RcptNo: 1

Received By: Anne Thorne 8/17/2018 2:20:00 PM

Completed By: Ashley Gallegos 8/17/2018 2:42:38 PM

Reviewed By: AG 08/17/18 labeled by: JAB 08/17/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 0/5 (<2 or >12 unless noted)
Adjusted? No
Checked by: VVZ 08/17/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1 - CF 1.0 = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	0900	H_2O	FB01	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/17/18	1420			8/17/18	1420
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.1 -CF-1.0=2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	0920	H_2O	EB01	40ml VOA-5	HCl	-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date	Time	Relinquished by:	Received by:	Date	Time
8/17/18	1420			8/17/18	1420
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: 3.1 - CF-LO = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	1000	H_2O	MKTF- 25	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -2	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/17/18	1420			08/17/18	1420
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1 -CF-1.0 = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	1110	H_2O	MKTF-31	40ml VOA-5	HCl	-004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/17/18	1420			08/17/18	20
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1-C F-1.0 = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	1145	H_2O	MKTF-40	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/17/18	1420			08/17/18	1420
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.1 - CF -1.0 = 2.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808B32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/17/18	—	H_2O	DUP01	40ml VOA-5	HCl	-006			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/17/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCl	-007										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/17/18	1420			8/17/18	1420
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808D32

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/22/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808D32**
Date Reported: **9/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/23/2018 5:42:34 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 6:50:52 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 6:50:52 PM	39971
Surr: DNOP	115	0	76.7-135		%Rec	1	8/27/2018 6:50:52 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/22/2018 7:30:28 PM	A53658
Chloride	0.21	0.029	0.50	J	mg/L	1	8/22/2018 7:30:28 PM	A53658
Bromide	ND	0.027	0.10		mg/L	1	8/22/2018 7:30:28 PM	A53658
Phosphorus, Orthophosphate (As P)	0.27	0.093	0.50	JH	mg/L	1	8/22/2018 7:30:28 PM	A53658
Sulfate	ND	0.21	0.50		mg/L	1	8/22/2018 7:30:28 PM	A53658
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/4/2018 2:46:30 PM	R53923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 5:15:06 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:15:06 PM	C54078
Calcium	ND	0.078	1.0		mg/L	1	9/11/2018 5:15:06 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:15:06 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:15:06 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 5:15:06 PM	C54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 5:15:06 PM	C54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 5:15:06 PM	C54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 5:15:06 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 5:15:06 PM	C54078
Sodium	0.25	0.16	1.0	J	mg/L	1	9/11/2018 5:15:06 PM	C54078
Zinc	0.0087	0.0021	0.010	J	mg/L	1	9/11/2018 5:15:06 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/10/2018 3:31:54 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:31:54 PM	39959
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 6:09:25 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:31:54 PM	39959
Iron	ND	0.010	0.020		mg/L	1	9/10/2018 3:31:54 PM	39959
Manganese	ND	0.0011	0.0020		mg/L	1	9/10/2018 3:31:54 PM	39959
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 6:09:25 PM	39959
Zinc	ND	0.0033	0.010		mg/L	1	9/10/2018 3:31:54 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/28/2018 11:25:41 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:25:41 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:25:41 AM	B53766
Uranium	ND	0.000096	0.00050		mg/L	1	8/28/2018 11:25:41 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/27/2018 12:37:07 PM	39959
Lead	ND	0.00023	0.00050		mg/L	1	8/27/2018 12:37:07 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:37:07 PM	39959
Uranium	ND	0.000068	0.00050		mg/L	1	8/27/2018 12:37:07 PM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:00:18 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Benzoic acid	8.4	6.3	20	J	µg/L	1	8/31/2018 3:39:47 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 3:39:47 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 3:39:47 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 3:39:47 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 3:39:47 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 3:39:47 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 3:39:47 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 3:39:47 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 3:39:47 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 3:39:47 PM	39989
Surr: 2-Fluorophenol	50.2	0	15-74.1		%Rec	1	8/31/2018 3:39:47 PM	39989
Surr: Phenol-d5	40.0	0	15-59.8		%Rec	1	8/31/2018 3:39:47 PM	39989
Surr: 2,4,6-Tribromophenol	74.2	0	22.1-112		%Rec	1	8/31/2018 3:39:47 PM	39989
Surr: Nitrobenzene-d5	68.0	0	33.2-94		%Rec	1	8/31/2018 3:39:47 PM	39989
Surr: 2-Fluorobiphenyl	70.6	0	34-90.9		%Rec	1	8/31/2018 3:39:47 PM	39989
Surr: 4-Terphenyl-d14	86.0	0	15-149		%Rec	1	8/31/2018 3:39:47 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Toluene	0.25	0.17	1.0	J	µg/L	1	8/23/2018 5:20:12 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Acetone	6.1	0.79	10	J	µg/L	1	8/24/2018 11:48:00 AM	R53711
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 5:20:12 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 5:20:12 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 5:20:12 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 5:20:12 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 5:20:12 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 5:20:12 PM	W5366
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	8/23/2018 5:20:12 PM	W5366
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	8/23/2018 5:20:12 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:10:00 AM
Lab ID: 1808D32-001
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	8/23/2018 5:20:12 PM	W5366
Surr: Toluene-d8	101	0	70-130		%Rec	1	8/23/2018 5:20:12 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.023	0.0097	0.050	J	mg/L	1	8/23/2018 5:20:12 PM	G53662
Surr: BFB	103	0	70-130		%Rec	1	8/23/2018 5:20:12 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/23/2018 6:27:51 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 7:15:27 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 7:15:27 PM	39971
Surr: DNOP	118	0	76.7-135		%Rec	1	8/27/2018 7:15:27 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/22/2018 8:22:33 PM	A53658
Chloride	0.20	0.029	0.50	J	mg/L	1	8/22/2018 8:22:33 PM	A53658
Bromide	ND	0.027	0.10		mg/L	1	8/22/2018 8:22:33 PM	A53658
Phosphorus, Orthophosphate (As P)	0.26	0.093	0.50	JH	mg/L	1	8/22/2018 8:22:33 PM	A53658
Sulfate	ND	0.21	0.50		mg/L	1	8/22/2018 8:22:33 PM	A53658
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/4/2018 3:01:56 PM	R53923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 5:19:32 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:19:32 PM	C54078
Calcium	0.15	0.078	1.0	J	mg/L	1	9/11/2018 5:19:32 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:19:32 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:19:32 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 5:19:32 PM	C54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 5:19:32 PM	C54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 5:19:32 PM	C54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 5:19:32 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 5:19:32 PM	C54078
Sodium	0.21	0.16	1.0	J	mg/L	1	9/11/2018 5:19:32 PM	C54078
Zinc	0.015	0.0021	0.010		mg/L	1	9/11/2018 5:19:32 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/10/2018 3:34:06 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:34:06 PM	39959
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 6:11:37 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:34:06 PM	39959
Iron	ND	0.010	0.020		mg/L	1	9/10/2018 3:34:06 PM	39959
Manganese	ND	0.0011	0.0020		mg/L	1	9/10/2018 3:34:06 PM	39959
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 6:11:37 PM	39959
Zinc	0.0036	0.0033	0.010	J	mg/L	1	9/10/2018 3:34:06 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/28/2018 11:54:24 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:54:24 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:54:24 AM	B53766
Uranium	ND	0.000096	0.00050		mg/L	1	8/28/2018 11:54:24 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/27/2018 12:39:28 PM	39959
Lead	ND	0.00023	0.00050		mg/L	1	8/27/2018 12:39:28 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:39:28 PM	39959
Uranium	ND	0.000068	0.00050		mg/L	1	8/27/2018 12:39:28 PM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:06:58 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Benzoic acid	7.6	6.3	20	J	µg/L	1	8/31/2018 4:09:14 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 4:09:14 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 4:09:14 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 4:09:14 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 4:09:14 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 4:09:14 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 4:09:14 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 4:09:14 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 4:09:14 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 4:09:14 PM	39989
Surr: 2-Fluorophenol	32.6	0	15-74.1		%Rec	1	8/31/2018 4:09:14 PM	39989
Surr: Phenol-d5	29.3	0	15-59.8		%Rec	1	8/31/2018 4:09:14 PM	39989
Surr: 2,4,6-Tribromophenol	56.8	0	22.1-112		%Rec	1	8/31/2018 4:09:14 PM	39989
Surr: Nitrobenzene-d5	47.1	0	33.2-94		%Rec	1	8/31/2018 4:09:14 PM	39989
Surr: 2-Fluorobiphenyl	56.1	0	34-90.9		%Rec	1	8/31/2018 4:09:14 PM	39989
Surr: 4-Terphenyl-d14	67.7	0	15-149		%Rec	1	8/31/2018 4:09:14 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Toluene	0.27	0.17	1.0	J	µg/L	1	8/23/2018 5:49:45 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Acetone	8.5	0.79	10	J	µg/L	1	8/24/2018 12:13:00 PM	R53711
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 5:49:45 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 5:49:45 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 5:49:45 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 5:49:45 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 5:49:45 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 5:49:45 PM	W5366
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	8/23/2018 5:49:45 PM	W5366
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	8/23/2018 5:49:45 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 10:35:00 AM
Lab ID: 1808D32-002
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	8/23/2018 5:49:45 PM	W5366
Surr: Toluene-d8	104	0	70-130		%Rec	1	8/23/2018 5:49:45 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.033	0.0097	0.050	J	mg/L	1	8/23/2018 5:49:45 PM	G53662
Surr: BFB	104	0	70-130		%Rec	1	8/23/2018 5:49:45 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0047	0.0092		µg/L	1	8/23/2018 6:43:01 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 7:40:09 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 7:40:09 PM	39971
Surr: DNOP	118	0	76.7-135		%Rec	1	8/27/2018 7:40:09 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.54	0.030	0.10		mg/L	1	9/5/2018 12:20:19 PM	R53942
Chloride	510	1.5	25		mg/L	50	9/5/2018 12:07:28 PM	R53942
Bromide	0.93	0.13	0.50		mg/L	5	8/22/2018 8:47:46 PM	A53658
Phosphorus, Orthophosphate (As P)	1.5	0.46	2.5	JH	mg/L	5	8/22/2018 8:47:46 PM	A53658
Sulfate	430	4.1	10		mg/L	20	8/22/2018 9:00:37 PM	A53658
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/4/2018 3:17:29 PM	R53923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.032	0.00099	0.0020		mg/L	1	9/11/2018 5:23:56 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:23:56 PM	C54078
Calcium	74	0.078	1.0		mg/L	1	9/11/2018 5:23:56 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:23:56 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:23:56 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 5:23:56 PM	C54078
Magnesium	13	0.25	1.0		mg/L	1	9/11/2018 5:23:56 PM	C54078
Manganese	0.015	0.00039	0.0020		mg/L	1	9/11/2018 5:23:56 PM	C54078
Potassium	0.18	0.11	1.0	J	mg/L	1	9/11/2018 5:23:56 PM	C54078
Silver	0.0021	0.0018	0.0050	J	mg/L	1	9/11/2018 5:23:56 PM	C54078
Sodium	810	3.3	20		mg/L	20	9/11/2018 6:43:49 PM	C54078
Zinc	0.013	0.0021	0.010		mg/L	1	9/11/2018 5:23:56 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.057	0.0010	0.0020		mg/L	1	9/10/2018 3:44:27 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:44:27 PM	39959
Chromium	0.0021	0.0018	0.0060	J	mg/L	1	9/10/2018 6:13:52 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:44:27 PM	39959
Iron	2.4	0.051	0.10	*	mg/L	5	9/10/2018 6:15:50 PM	39959
Manganese	0.15	0.0011	0.0020	*	mg/L	1	9/10/2018 3:44:27 PM	39959
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 6:13:52 PM	39959
Zinc	0.0069	0.0033	0.010	J	mg/L	1	9/10/2018 3:44:27 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00073	0.00042	0.0010	J	mg/L	1	8/28/2018 11:56:47 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:56:47 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:56:47 AM	B53766
Uranium	0.030	0.00048	0.0025		mg/L	5	8/28/2018 12:15:56 PM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0015	0.00041	0.0010		mg/L	1	8/27/2018 12:41:51 PM	39959
Lead	0.0011	0.00023	0.00050		mg/L	1	8/27/2018 12:41:51 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:41:51 PM	39959
Uranium	0.031	0.00034	0.0025	*	mg/L	5	8/28/2018 9:07:20 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	9/11/2018 12:09:12 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Benzoic acid	8.3	6.3	20	J	µg/L	1	8/31/2018 4:38:49 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 4:38:49 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 4:38:49 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 4:38:49 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 4:38:49 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 4:38:49 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 4:38:49 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 4:38:49 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 4:38:49 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 4:38:49 PM	39989
Surr: 2-Fluorophenol	39.6	0	15-74.1		%Rec	1	8/31/2018 4:38:49 PM	39989
Surr: Phenol-d5	31.3	0	15-59.8		%Rec	1	8/31/2018 4:38:49 PM	39989
Surr: 2,4,6-Tribromophenol	71.8	0	22.1-112		%Rec	1	8/31/2018 4:38:49 PM	39989
Surr: Nitrobenzene-d5	52.4	0	33.2-94		%Rec	1	8/31/2018 4:38:49 PM	39989
Surr: 2-Fluorobiphenyl	53.0	0	34-90.9		%Rec	1	8/31/2018 4:38:49 PM	39989
Surr: 4-Terphenyl-d14	82.1	0	15-149		%Rec	1	8/31/2018 4:38:49 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Methyl tert-butyl ether (MTBE)	1.8	0.32	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2-Dichloroethane (EDC)	3.1	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 6:19:17 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 6:19:17 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 6:19:17 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
cis-1,2-DCE	4.8	0.38	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1-Dichloroethane	60	0.40	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1-Dichloroethene	4.8	0.12	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 6:19:17 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 6:19:17 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Tetrachloroethene (PCE)	0.17	0.15	1.0	J	µg/L	1	8/23/2018 6:19:17 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1,1-Trichloroethane	0.87	0.15	1.0	J	µg/L	1	8/23/2018 6:19:17 PM	W5366
1,1,2-Trichloroethane	0.52	0.23	1.0	J	µg/L	1	8/23/2018 6:19:17 PM	W5366
Trichloroethene (TCE)	3.7	0.26	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 6:19:17 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 6:19:17 PM	W5366
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	8/23/2018 6:19:17 PM	W5366
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	8/23/2018 6:19:17 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 11:00:00 AM
Lab ID: 1808D32-003 **Matrix:** AQUEOUS **Received Date:** 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	8/23/2018 6:19:17 PM	W5366
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	8/23/2018 6:19:17 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.12	0.0097	0.050		mg/L	1	8/23/2018 6:19:17 PM	G5366
Surr: BFB	102	0	70-130		%Rec	1	8/23/2018 6:19:17 PM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 8:04:41 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 8:04:41 PM	39971
Surr: DNOP	117	0	76.7-135		%Rec	1	8/27/2018 8:04:41 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.57	0.15	0.50		mg/L	5	9/5/2018 12:33:11 PM	R53942
Chloride	200	0.59	10		mg/L	20	8/22/2018 1:14:32 PM	R53622
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/22/2018 1:02:07 PM	R53622
Bromide	0.79	0.13	0.50		mg/L	5	8/22/2018 1:02:07 PM	R53622
Nitrogen, Nitrate (As N)	0.31	0.033	0.50	J	mg/L	5	8/22/2018 1:02:07 PM	R53622
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/22/2018 1:02:07 PM	R53622
Sulfate	520	4.1	10		mg/L	20	8/22/2018 1:14:32 PM	R53622
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.026	0.00099	0.0020		mg/L	1	9/11/2018 5:34:34 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:34:34 PM	C54078
Calcium	72	0.078	1.0		mg/L	1	9/11/2018 5:34:34 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:34:34 PM	C54078
Copper	0.0038	0.0032	0.0060	J	mg/L	1	9/11/2018 5:34:34 PM	C54078
Iron	0.053	0.016	0.020		mg/L	1	9/11/2018 5:34:34 PM	C54078
Magnesium	9.5	0.25	1.0		mg/L	1	9/11/2018 5:34:34 PM	C54078
Manganese	0.48	0.00039	0.0020	*	mg/L	1	9/11/2018 5:34:34 PM	C54078
Potassium	0.29	0.11	1.0	J	mg/L	1	9/11/2018 5:34:34 PM	C54078
Silver	0.0020	0.0018	0.0050	J	mg/L	1	9/11/2018 5:34:34 PM	C54078
Sodium	580	1.6	10		mg/L	10	9/11/2018 6:46:13 PM	C54078
Zinc	0.0076	0.0021	0.010	J	mg/L	1	9/11/2018 5:34:34 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.15	0.0010	0.0020		mg/L	1	9/10/2018 3:46:28 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:46:28 PM	39959
Chromium	0.0040	0.0018	0.0060	J	mg/L	1	9/10/2018 6:17:42 PM	39959
Copper	0.0078	0.0041	0.0060		mg/L	1	9/10/2018 3:46:28 PM	39959
Iron	4.5	0.051	0.10	*	mg/L	5	9/10/2018 6:19:41 PM	39959
Manganese	0.60	0.0011	0.0020	*	mg/L	1	9/10/2018 3:46:28 PM	39959
Silver	0.0018	0.0012	0.0050	J	mg/L	1	9/10/2018 6:17:42 PM	39959
Zinc	0.012	0.0033	0.010		mg/L	1	9/10/2018 3:46:28 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	8/28/2018 11:32:53 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:32:53 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:32:53 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.0082	0.000096	0.00050		mg/L	1	8/28/2018 11:32:53 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	8/27/2018 12:44:13 PM	39959
Lead	0.0023	0.00023	0.00050		mg/L	1	8/27/2018 12:44:13 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:44:13 PM	39959
Uranium	0.0085	0.000068	0.00050		mg/L	1	8/28/2018 9:09:41 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:11:27 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Benzoic acid	8.4	6.3	20	J	µg/L	1	8/31/2018 5:08:20 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 5:08:20 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 5:08:20 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 5:08:20 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 5:08:20 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 5:08:20 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 5:08:20 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 5:08:20 PM	39989
Surr: 2-Fluorophenol	43.1	0	15-74.1		%Rec	1	8/31/2018 5:08:20 PM	39989
Surr: Phenol-d5	33.8	0	15-59.8		%Rec	1	8/31/2018 5:08:20 PM	39989
Surr: 2,4,6-Tribromophenol	71.1	0	22.1-112		%Rec	1	8/31/2018 5:08:20 PM	39989
Surr: Nitrobenzene-d5	59.6	0	33.2-94		%Rec	1	8/31/2018 5:08:20 PM	39989
Surr: 2-Fluorobiphenyl	66.6	0	34-90.9		%Rec	1	8/31/2018 5:08:20 PM	39989
Surr: 4-Terphenyl-d14	76.6	0	15-149		%Rec	1	8/31/2018 5:08:20 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Methyl tert-butyl ether (MTBE)	4.7	0.32	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 6:48:38 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 6:48:38 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 6:48:38 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 6:48:38 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 6:48:38 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 6:48:38 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 6:48:38 PM	W5366
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	8/23/2018 6:48:38 PM	W5366
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/23/2018 6:48:38 PM	W5366
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	8/23/2018 6:48:38 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 1:35:00 PM
Lab ID: 1808D32-004 **Matrix:** AQUEOUS **Received Date:** 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	8/23/2018 6:48:38 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.021	0.0097	0.050	J	mg/L	1	8/23/2018 6:48:38 PM	G5366
Surr: BFB	101	0	70-130		%Rec	1	8/23/2018 6:48:38 PM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0058	0.0048	0.0093	J	µg/L	1	8/23/2018 7:13:11 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.4	0.63	1.0		mg/L	1	8/27/2018 8:29:19 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 8:29:19 PM	39971
Surr: DNOP	125	0	76.7-135		%Rec	1	8/27/2018 8:29:19 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	9/5/2018 12:58:54 PM	R53942
Chloride	560	1.5	25		mg/L	50	9/5/2018 12:46:03 PM	R53942
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/22/2018 1:26:58 PM	R53622
Bromide	0.96	0.13	0.50		mg/L	5	8/22/2018 1:26:58 PM	R53622
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/22/2018 1:26:58 PM	R53622
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/22/2018 1:26:58 PM	R53622
Sulfate	30	1.0	2.5		mg/L	5	8/22/2018 1:26:58 PM	R53622
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.25	0.00099	0.0020		mg/L	1	9/11/2018 5:38:44 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:38:44 PM	C54078
Calcium	120	0.39	5.0		mg/L	5	9/11/2018 5:40:57 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:38:44 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:38:44 PM	C54078
Iron	0.33	0.016	0.020	*	mg/L	1	9/11/2018 5:38:44 PM	C54078
Magnesium	19	0.25	1.0		mg/L	1	9/11/2018 5:38:44 PM	C54078
Manganese	1.8	0.0020	0.010	*	mg/L	5	9/11/2018 5:40:57 PM	C54078
Potassium	2.1	0.11	1.0		mg/L	1	9/11/2018 5:38:44 PM	C54078
Silver	0.0028	0.0018	0.0050	J	mg/L	1	9/11/2018 5:38:44 PM	C54078
Sodium	620	1.6	10		mg/L	10	9/11/2018 6:48:14 PM	C54078
Zinc	0.018	0.0021	0.010		mg/L	1	9/11/2018 5:38:44 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.27	0.0010	0.0020		mg/L	1	9/10/2018 3:48:25 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:48:25 PM	39959
Chromium	0.0020	0.0018	0.0060	J	mg/L	1	9/10/2018 6:28:08 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:48:25 PM	39959
Iron	1.2	0.051	0.10	*	mg/L	5	9/12/2018 3:01:36 PM	39959
Manganese	1.8	0.0055	0.010	*	mg/L	5	9/12/2018 3:01:36 PM	39959
Silver	0.0029	0.0012	0.0050	J	mg/L	1	9/10/2018 6:28:08 PM	39959
Zinc	0.013	0.0033	0.010		mg/L	1	9/10/2018 3:48:25 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0021	0.00042	0.0010		mg/L	1	8/28/2018 11:35:15 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	0.0014	0.00017	0.00050		mg/L	1	8/28/2018 11:35:15 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:35:15 AM	B53766
Uranium	0.015	0.000096	0.00050		mg/L	1	8/28/2018 11:35:15 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0029	0.00041	0.0010		mg/L	1	8/27/2018 12:46:34 PM	39959
Lead	0.0032	0.00023	0.00050		mg/L	1	8/27/2018 12:46:34 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:46:34 PM	39959
Uranium	0.016	0.000068	0.00050		mg/L	1	8/28/2018 9:12:02 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:13:43 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzoic acid	ND	6.3	20		µg/L	1	8/31/2018 5:37:48 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 5:37:48 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 5:37:48 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 5:37:48 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 5:37:48 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 5:37:48 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 5:37:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 5:37:48 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 5:37:48 PM	39989
Surr: 2-Fluorophenol	35.9	0	15-74.1		%Rec	1	8/31/2018 5:37:48 PM	39989
Surr: Phenol-d5	22.4	0	15-59.8		%Rec	1	8/31/2018 5:37:48 PM	39989
Surr: 2,4,6-Tribromophenol	67.5	0	22.1-112		%Rec	1	8/31/2018 5:37:48 PM	39989
Surr: Nitrobenzene-d5	69.6	0	33.2-94		%Rec	1	8/31/2018 5:37:48 PM	39989
Surr: 2-Fluorobiphenyl	73.4	0	34-90.9		%Rec	1	8/31/2018 5:37:48 PM	39989
Surr: 4-Terphenyl-d14	76.3	0	15-149		%Rec	1	8/31/2018 5:37:48 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	4800	35	200		µg/L	200	8/23/2018 9:14:28 PM	W5366
Toluene	25	3.4	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Ethylbenzene	320	4.5	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Methyl tert-butyl ether (MTBE)	120	6.4	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
1,2-Dichloroethane (EDC)	8.2	8.0	20	J	µg/L	20	8/24/2018 10:59:09 AM	R5370
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Naphthalene	ND	5.8	40		µg/L	20	8/24/2018 10:59:09 AM	R5370
1-Methylnaphthalene	ND	6.7	80		µg/L	20	8/24/2018 10:59:09 AM	R5370
2-Methylnaphthalene	ND	4.8	80		µg/L	20	8/24/2018 10:59:09 AM	R5370
Acetone	ND	16	200		µg/L	20	8/24/2018 10:59:09 AM	R5370
Bromobenzene	ND	6.4	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Bromodichloromethane	ND	5.7	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Bromoform	ND	6.5	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Bromomethane	ND	5.1	60		µg/L	20	8/24/2018 10:59:09 AM	R5370
2-Butanone	ND	25	200		µg/L	20	8/24/2018 10:59:09 AM	R5370
Carbon disulfide	ND	7.7	200		µg/L	20	8/24/2018 10:59:09 AM	R5370
Carbon Tetrachloride	ND	2.7	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Chlorobenzene	ND	5.8	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Chloroethane	ND	3.3	40		µg/L	20	8/24/2018 10:59:09 AM	R5370
Chloroform	ND	8.0	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
Chloromethane	ND	5.9	60		µg/L	20	8/24/2018 10:59:09 AM	R5370
2-Chlorotoluene	ND	8.0	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
4-Chlorotoluene	ND	8.0	20		µg/L	20	8/24/2018 10:59:09 AM	R5370
cis-1,2-DCE	11	7.5	20	J	µg/L	20	8/24/2018 10:59:09 AM	R5370
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	8/24/2018 10:59:09 AM	R5370

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	8/24/2018 10:59:09 AM	R53709
Dibromochloromethane	ND	4.7	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Dibromomethane	ND	6.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Dichlorodifluoromethane	ND	20	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1-Dichloroethane	74	8.0	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1-Dichloroethene	22	2.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,2-Dichloropropane	ND	3.1	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,3-Dichloropropane	ND	5.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
2,2-Dichloropropane	ND	3.7	40		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1-Dichloropropene	ND	3.2	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Hexachlorobutadiene	ND	16	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
2-Hexanone	ND	18	200		µg/L	20	8/24/2018 10:59:09 AM	R53709
Isopropylbenzene	35	4.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
4-Isopropyltoluene	ND	4.8	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	8/24/2018 10:59:09 AM	R53709
Methylene Chloride	ND	4.1	60		µg/L	20	8/24/2018 10:59:09 AM	R53709
n-Butylbenzene	13	5.0	60	J	µg/L	20	8/24/2018 10:59:09 AM	R53709
n-Propylbenzene	89	4.9	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
sec-Butylbenzene	6.4	4.0	20	J	µg/L	20	8/24/2018 10:59:09 AM	R53709
Styrene	ND	5.0	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
tert-Butylbenzene	ND	4.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	8/24/2018 10:59:09 AM	R53709
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
trans-1,2-DCE	ND	3.7	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Trichlorofluoromethane	ND	3.4	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
1,2,3-Trichloropropane	ND	11	40		µg/L	20	8/24/2018 10:59:09 AM	R53709
Vinyl chloride	32	2.2	20		µg/L	20	8/24/2018 10:59:09 AM	R53709
Xylenes, Total	ND	13	30		µg/L	20	8/24/2018 10:59:09 AM	R53709
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	20	8/24/2018 10:59:09 AM	R53709

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-24
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 2:30:00 PM
Lab ID: 1808D32-005 **Matrix:** AQUEOUS **Received Date:** 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	8/24/2018 10:59:09 AM	R53709
Surr: Dibromofluoromethane	107	0	70-130		%Rec	20	8/24/2018 10:59:09 AM	R53709
Surr: Toluene-d8	101	0	70-130		%Rec	20	8/24/2018 10:59:09 AM	R53709
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	23	1.9	10		mg/L	200	8/23/2018 9:14:28 PM	G53662
Surr: BFB	98.1	0	70-130		%Rec	200	8/23/2018 9:14:28 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	0.0053	0.0048	0.0093	J	µg/L	1	8/23/2018 7:28:21 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	8/27/2018 8:53:48 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 8:53:48 PM	39971
Surr: DNOP	122	0	76.7-135		%Rec	1	8/27/2018 8:53:48 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.1	0.15	0.50		mg/L	5	9/5/2018 1:24:37 PM	R53942
Chloride	510	1.5	25		mg/L	50	9/5/2018 1:11:46 PM	R53942
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/22/2018 1:51:47 PM	R53622
Bromide	1.0	0.13	0.50		mg/L	5	8/22/2018 1:51:47 PM	R53622
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/22/2018 1:51:47 PM	R53622
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/22/2018 1:51:47 PM	R53622
Sulfate	11	1.0	2.5		mg/L	5	8/22/2018 1:51:47 PM	R53622
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.27	0.00099	0.0020		mg/L	1	9/11/2018 5:43:03 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:43:03 PM	C54078
Calcium	73	0.078	1.0		mg/L	1	9/11/2018 5:43:03 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:43:03 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:43:03 PM	C54078
Iron	0.027	0.016	0.020		mg/L	1	9/11/2018 5:43:03 PM	C54078
Magnesium	12	0.25	1.0		mg/L	1	9/11/2018 5:43:03 PM	C54078
Manganese	0.51	0.00039	0.0020	*	mg/L	1	9/11/2018 5:43:03 PM	C54078
Potassium	2.2	0.11	1.0		mg/L	1	9/11/2018 5:43:03 PM	C54078
Silver	0.0022	0.0018	0.0050	J	mg/L	1	9/11/2018 5:43:03 PM	C54078
Sodium	740	3.3	20		mg/L	20	9/11/2018 6:50:26 PM	C54078
Zinc	0.0071	0.0021	0.010	J	mg/L	1	9/11/2018 5:43:03 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.27	0.0010	0.0020		mg/L	1	9/10/2018 3:50:25 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:50:25 PM	39959
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 6:30:07 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:50:25 PM	39959
Iron	0.20	0.010	0.020		mg/L	1	9/10/2018 3:50:25 PM	39959
Manganese	0.52	0.0011	0.0020	*	mg/L	1	9/10/2018 3:50:25 PM	39959
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/10/2018 6:30:07 PM	39959
Zinc	0.0044	0.0033	0.010	J	mg/L	1	9/10/2018 3:50:25 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0025	0.00042	0.0010		mg/L	1	8/28/2018 11:37:40 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	0.00024	0.00017	0.00050	J	mg/L	1	8/28/2018 11:37:40 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:37:40 AM	B53766
Uranium	0.039	0.00048	0.0025	*	mg/L	5	8/28/2018 11:59:11 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0030	0.00041	0.0010		mg/L	1	8/27/2018 12:48:58 PM	39959
Lead	0.00051	0.00023	0.00050		mg/L	1	8/27/2018 12:48:58 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:48:58 PM	39959
Uranium	0.038	0.00034	0.0025	*	mg/L	5	8/28/2018 9:19:04 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:15:59 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzoic acid	ND	6.3	20		µg/L	1	8/31/2018 6:07:22 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4-Dimethylphenol	9.9	5.9	10	J	µg/L	1	8/31/2018 6:07:22 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 6:07:22 PM	39989
1-Methylnaphthalene	9.0	7.0	10	J	µg/L	1	8/31/2018 6:07:22 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2-Methylphenol	12	6.3	10		µg/L	1	8/31/2018 6:07:22 PM	39989
3+4-Methylphenol	10	5.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 6:07:22 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Naphthalene	6.9	5.0	10	J	µg/L	1	8/31/2018 6:07:22 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 6:07:22 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 6:07:22 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Phenol	15	6.0	10		µg/L	1	8/31/2018 6:07:22 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 6:07:22 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 6:07:22 PM	39989
Surr: 2-Fluorophenol	40.8	0	15-74.1		%Rec	1	8/31/2018 6:07:22 PM	39989
Surr: Phenol-d5	32.2	0	15-59.8		%Rec	1	8/31/2018 6:07:22 PM	39989
Surr: 2,4,6-Tribromophenol	75.1	0	22.1-112		%Rec	1	8/31/2018 6:07:22 PM	39989
Surr: Nitrobenzene-d5	56.0	0	33.2-94		%Rec	1	8/31/2018 6:07:22 PM	39989
Surr: 2-Fluorobiphenyl	61.2	0	34-90.9		%Rec	1	8/31/2018 6:07:22 PM	39989
Surr: 4-Terphenyl-d14	76.8	0	15-149		%Rec	1	8/31/2018 6:07:22 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2500	17	100		µg/L	100	8/23/2018 11:41:01 PM	W5366
Toluene	31	1.7	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Ethylbenzene	140	2.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Methyl tert-butyl ether (MTBE)	100	3.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2,4-Trimethylbenzene	60	2.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,3,5-Trimethylbenzene	ND	2.3	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2-Dichloroethane (EDC)	7.8	4.0	10	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Naphthalene	5.5	2.9	20	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
1-Methylnaphthalene	3.4	3.4	40	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
2-Methylnaphthalene	ND	2.4	40		µg/L	10	8/24/2018 12:10:21 AM	W5366
Acetone	ND	7.9	100		µg/L	10	8/24/2018 12:10:21 AM	W5366
Bromobenzene	ND	3.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Bromodichloromethane	ND	2.8	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Bromoform	ND	3.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Bromomethane	ND	2.6	30		µg/L	10	8/24/2018 12:10:21 AM	W5366
2-Butanone	ND	13	100		µg/L	10	8/24/2018 12:10:21 AM	W5366
Carbon disulfide	ND	3.9	100		µg/L	10	8/24/2018 12:10:21 AM	W5366
Carbon Tetrachloride	ND	1.3	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Chlorobenzene	ND	2.9	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Chloroethane	ND	1.6	20		µg/L	10	8/24/2018 12:10:21 AM	W5366
Chloroform	ND	4.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Chloromethane	ND	2.9	30		µg/L	10	8/24/2018 12:10:21 AM	W5366
2-Chlorotoluene	ND	4.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
4-Chlorotoluene	ND	4.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
cis-1,2-DCE	9.9	3.8	10	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	8/24/2018 12:10:21 AM	W5366
Dibromochloromethane	ND	2.4	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Dibromomethane	ND	3.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Dichlorodifluoromethane	ND	10	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1-Dichloroethane	42	4.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1-Dichloroethene	24	1.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2-Dichloropropane	ND	1.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,3-Dichloropropane	ND	2.7	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
2,2-Dichloropropane	ND	1.8	20		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Hexachlorobutadiene	ND	8.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
2-Hexanone	ND	9.1	100		µg/L	10	8/24/2018 12:10:21 AM	W5366
Isopropylbenzene	7.4	2.2	10	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
4-Isopropyltoluene	ND	2.4	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	8/24/2018 12:10:21 AM	W5366
Methylene Chloride	ND	2.1	30		µg/L	10	8/24/2018 12:10:21 AM	W5366
n-Butylbenzene	ND	2.5	30		µg/L	10	8/24/2018 12:10:21 AM	W5366
n-Propylbenzene	18	2.4	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
sec-Butylbenzene	ND	2.0	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Styrene	ND	2.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
tert-Butylbenzene	ND	2.2	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	8/24/2018 12:10:21 AM	W5366
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1,1-Trichloroethane	ND	1.5	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
Trichlorofluoromethane	ND	1.7	10		µg/L	10	8/24/2018 12:10:21 AM	W5366
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	8/24/2018 12:10:21 AM	W5366
Vinyl chloride	7.1	1.1	10	J	µg/L	10	8/24/2018 12:10:21 AM	W5366
Xylenes, Total	31	6.4	15		µg/L	10	8/24/2018 12:10:21 AM	W5366
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	10	8/24/2018 12:10:21 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:10:00 PM
Lab ID: 1808D32-006
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	10	8/24/2018 12:10:21 AM	W5366
Surr: Dibromofluoromethane	107	0	70-130		%Rec	10	8/24/2018 12:10:21 AM	W5366
Surr: Toluene-d8	98.8	0	70-130		%Rec	10	8/24/2018 12:10:21 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	7.8	0.097	0.50		mg/L	10	8/24/2018 12:10:21 AM	G53662
Surr: BFB	101	0	70-130		%Rec	10	8/24/2018 12:10:21 AM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007 **Matrix:** AQUEOUS **Received Date:** 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 9:18:19 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 9:18:19 PM	39971
Surr: DNOP	123	0	76.7-135		%Rec	1	8/27/2018 9:18:19 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.48	0.15	0.50	J	mg/L	5	9/5/2018 2:16:04 PM	R53942
Chloride	540	1.5	25		mg/L	50	9/5/2018 2:03:12 PM	R53942
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/22/2018 2:16:36 PM	R53622
Bromide	2.4	0.13	0.50		mg/L	5	8/22/2018 2:16:36 PM	R53622
Nitrogen, Nitrate (As N)	1.3	0.033	0.50		mg/L	5	8/22/2018 2:16:36 PM	R53622
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/22/2018 2:16:36 PM	R53622
Sulfate	240	4.1	10		mg/L	20	8/22/2018 2:29:01 PM	R53622
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.034	0.00099	0.0020		mg/L	1	9/11/2018 5:47:19 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:47:19 PM	C54078
Calcium	38	0.078	1.0		mg/L	1	9/11/2018 5:47:19 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:47:19 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:47:19 PM	C54078
Iron	0.031	0.016	0.020		mg/L	1	9/11/2018 5:47:19 PM	C54078
Magnesium	6.9	0.25	1.0		mg/L	1	9/11/2018 5:47:19 PM	C54078
Manganese	0.0046	0.00039	0.0020		mg/L	1	9/11/2018 5:47:19 PM	C54078
Potassium	1.8	0.11	1.0		mg/L	1	9/11/2018 5:47:19 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 5:47:19 PM	C54078
Sodium	600	3.3	20		mg/L	20	9/11/2018 6:52:39 PM	C54078
Zinc	0.0088	0.0021	0.010	J	mg/L	1	9/11/2018 5:47:19 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.077	0.0010	0.0020		mg/L	1	9/10/2018 3:52:37 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:52:37 PM	39959
Chromium	0.0024	0.0018	0.0060	J	mg/L	1	9/10/2018 6:34:24 PM	39959
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 3:52:37 PM	39959
Iron	4.4	0.051	0.10	*	mg/L	5	9/10/2018 6:36:23 PM	39959
Manganese	0.15	0.0011	0.0020	*	mg/L	1	9/10/2018 3:52:37 PM	39959
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 6:34:24 PM	39959
Zinc	0.013	0.0033	0.010		mg/L	1	9/10/2018 3:52:37 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0015	0.00042	0.0010		mg/L	1	8/28/2018 11:40:06 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:40:06 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:40:06 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.15	0.00096	0.0050	*	mg/L	10	8/28/2018 12:01:36 PM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0024	0.00041	0.0010		mg/L	1	8/27/2018 12:51:19 PM	39959
Lead	0.0029	0.00023	0.00050		mg/L	1	8/27/2018 12:51:19 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 12:51:19 PM	39959
Uranium	0.14	0.00068	0.0050	*	mg/L	10	8/28/2018 9:21:27 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 12:22:52 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Aniline	ND	6.2	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Anthracene	ND	5.7	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Benzoic acid	7.9	6.3	20	J	µg/L	1	8/31/2018 6:36:48 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Carbazole	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Chrysene	ND	6.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Fluorene	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Isophorone	ND	6.2	10		µg/L	1	8/31/2018 6:36:48 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	8/31/2018 6:36:48 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	8/31/2018 6:36:48 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	8/31/2018 6:36:48 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	8/31/2018 6:36:48 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Phenol	ND	6.0	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Pyrene	ND	6.5	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Pyridine	ND	5.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	8/31/2018 6:36:48 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	8/31/2018 6:36:48 PM	39989
Surr: 2-Fluorophenol	36.8	0	15-74.1		%Rec	1	8/31/2018 6:36:48 PM	39989
Surr: Phenol-d5	29.4	0	15-59.8		%Rec	1	8/31/2018 6:36:48 PM	39989
Surr: 2,4,6-Tribromophenol	74.5	0	22.1-112		%Rec	1	8/31/2018 6:36:48 PM	39989
Surr: Nitrobenzene-d5	51.1	0	33.2-94		%Rec	1	8/31/2018 6:36:48 PM	39989
Surr: 2-Fluorobiphenyl	55.7	0	34-90.9		%Rec	1	8/31/2018 6:36:48 PM	39989
Surr: 4-Terphenyl-d14	80.3	0	15-149		%Rec	1	8/31/2018 6:36:48 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Methyl tert-butyl ether (MTBE)	8.0	0.32	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 7:17:52 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 7:17:52 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 7:17:52 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 7:17:52 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 7:17:52 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 7:17:52 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 7:17:52 PM	W5366
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/23/2018 7:17:52 PM	W5366
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	8/23/2018 7:17:52 PM	W5366
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	8/23/2018 7:17:52 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-28
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 3:50:00 PM
Lab ID: 1808D32-007
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	101	0	70-130		%Rec	1	8/23/2018 7:17:52 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.024	0.0097	0.050	J	mg/L	1	8/23/2018 7:17:52 PM	G5366
Surr: BFB	103	0	70-130		%Rec	1	8/23/2018 7:17:52 PM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	8/23/2018 7:43:29 PM	39946
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 9:42:45 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 9:42:45 PM	39971
Surr: DNOP	127	0	76.7-135		%Rec	1	8/27/2018 9:42:45 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	9/5/2018 2:41:47 PM	R53942
Chloride	4000	15	250		mg/L	500	9/5/2018 2:28:55 PM	R53942
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	8/22/2018 3:18:40 PM	R53622
Bromide	1.3	0.13	0.50		mg/L	5	8/22/2018 3:06:15 PM	R53622
Nitrogen, Nitrate (As N)	0.61	0.033	0.50		mg/L	5	8/22/2018 3:06:15 PM	R53622
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/22/2018 3:06:15 PM	R53622
Sulfate	300	4.1	10		mg/L	20	8/22/2018 3:18:40 PM	R53622
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.068	0.00099	0.0020		mg/L	1	9/11/2018 5:51:27 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:51:27 PM	C54078
Calcium	280	0.39	5.0		mg/L	5	9/11/2018 5:53:41 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:51:27 PM	C54078
Copper	0.0052	0.0032	0.0060	J	mg/L	1	9/11/2018 5:51:27 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 5:51:27 PM	C54078
Magnesium	46	0.25	1.0		mg/L	1	9/11/2018 5:51:27 PM	C54078
Manganese	0.12	0.00039	0.0020	*	mg/L	1	9/11/2018 5:51:27 PM	C54078
Potassium	12	0.11	1.0		mg/L	1	9/11/2018 5:51:27 PM	C54078
Silver	0.0064	0.0018	0.0050		mg/L	1	9/11/2018 5:51:27 PM	C54078
Sodium	2400	8.2	50		mg/L	50	9/11/2018 7:01:34 PM	C54078
Zinc	0.012	0.0021	0.010		mg/L	1	9/11/2018 5:51:27 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.17	0.0010	0.0020		mg/L	1	9/10/2018 3:54:35 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:54:35 PM	39959
Chromium	0.0042	0.0018	0.0060	J	mg/L	1	9/10/2018 6:38:15 PM	39959
Copper	0.0082	0.0041	0.0060		mg/L	1	9/10/2018 3:54:35 PM	39959
Iron	6.7	0.20	0.40	*	mg/L	20	9/12/2018 3:03:46 PM	39959
Manganese	1.2	0.011	0.020	*	mg/L	10	9/10/2018 6:40:20 PM	39959
Silver	0.0058	0.0012	0.0050		mg/L	1	9/10/2018 6:38:15 PM	39959
Zinc	0.025	0.0033	0.010		mg/L	1	9/10/2018 3:54:35 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0024	0.00042	0.0010		mg/L	1	8/28/2018 11:42:29 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Lead	ND	0.00087	0.0025		mg/L	5	8/28/2018 12:03:59 PM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:42:29 AM	B53766
Uranium	0.033	0.00048	0.0025	*	mg/L	5	8/28/2018 12:03:59 PM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0040	0.0021	0.0050	J	mg/L	5	8/28/2018 9:23:47 AM	39959
Lead	0.0065	0.0011	0.0025		mg/L	5	8/28/2018 9:23:47 AM	39959
Selenium	ND	0.0049	0.0050		mg/L	5	8/28/2018 9:23:47 AM	39959
Uranium	0.035	0.00034	0.0025	*	mg/L	5	8/28/2018 9:23:47 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000038	0.00020	J	mg/L	1	9/11/2018 12:25:09 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Benzoic acid	8.0	6.3	20	J	µg/L	1	9/4/2018 2:50:12 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/4/2018 2:50:12 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/4/2018 2:50:12 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/4/2018 2:50:12 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/4/2018 2:50:12 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/4/2018 2:50:12 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/4/2018 2:50:12 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyrene	ND	6.5	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/4/2018 2:50:12 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/4/2018 2:50:12 PM	39989
Surr: 2-Fluorophenol	35.5	0	15-74.1		%Rec	1	9/4/2018 2:50:12 PM	39989
Surr: Phenol-d5	30.6	0	15-59.8		%Rec	1	9/4/2018 2:50:12 PM	39989
Surr: 2,4,6-Tribromophenol	58.6	0	22.1-112		%Rec	1	9/4/2018 2:50:12 PM	39989
Surr: Nitrobenzene-d5	49.5	0	33.2-94		%Rec	1	9/4/2018 2:50:12 PM	39989
Surr: 2-Fluorobiphenyl	50.8	0	34-90.9		%Rec	1	9/4/2018 2:50:12 PM	39989
Surr: 4-Terphenyl-d14	67.1	0	15-149		%Rec	1	9/4/2018 2:50:12 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Methyl tert-butyl ether (MTBE)	14	0.32	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2-Dichloroethane (EDC)	0.53	0.40	1.0	J	µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 7:47:04 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 7:47:04 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 7:47:04 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1-Dichloroethane	1.9	0.40	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 7:47:04 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 7:47:04 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 7:47:04 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 7:47:04 PM	W5366
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/23/2018 7:47:04 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-27
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018 4:25:00 PM
Lab ID: 1808D32-008
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	8/23/2018 7:47:04 PM	W5366
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	8/23/2018 7:47:04 PM	W5366
Surr: Toluene-d8	101	0	70-130		%Rec	1	8/23/2018 7:47:04 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.033	0.0097	0.050	J	mg/L	1	8/23/2018 7:47:04 PM	G53662
Surr: BFB	105	0	70-130		%Rec	1	8/23/2018 7:47:04 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 10:07:15 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 10:07:15 PM	39971
Surr: DNOP	128	0	76.7-135		%Rec	1	8/27/2018 10:07:15 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.62	0.15	0.50		mg/L	5	9/5/2018 2:54:40 PM	R53942
Chloride	180	0.59	10		mg/L	20	8/22/2018 9:26:20 PM	A53658
Bromide	0.87	0.13	0.50		mg/L	5	8/22/2018 9:13:29 PM	A53658
Phosphorus, Orthophosphate (As P)	1.4	0.46	2.5	JH	mg/L	5	8/22/2018 9:13:29 PM	A53658
Sulfate	470	4.1	10		mg/L	20	8/22/2018 9:26:20 PM	A53658
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/4/2018 4:24:56 PM	R53923
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.024	0.00099	0.0020		mg/L	1	9/11/2018 6:04:10 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 6:04:10 PM	C54078
Calcium	71	0.078	1.0		mg/L	1	9/11/2018 6:04:10 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 6:04:10 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 6:04:10 PM	C54078
Iron	0.030	0.016	0.020		mg/L	1	9/11/2018 6:04:10 PM	C54078
Magnesium	9.5	0.25	1.0		mg/L	1	9/11/2018 6:04:10 PM	C54078
Manganese	0.47	0.00039	0.0020	*	mg/L	1	9/11/2018 6:04:10 PM	C54078
Potassium	0.26	0.11	1.0	J	mg/L	1	9/11/2018 6:04:10 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 6:04:10 PM	C54078
Sodium	570	3.3	20		mg/L	20	9/11/2018 7:03:59 PM	C54078
Zinc	0.016	0.0021	0.010		mg/L	1	9/11/2018 6:04:10 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.15	0.0010	0.0020		mg/L	1	9/10/2018 3:56:35 PM	39959
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 3:56:35 PM	39959
Chromium	0.0042	0.0018	0.0060	J	mg/L	1	9/10/2018 6:42:11 PM	39959
Copper	0.0065	0.0041	0.0060		mg/L	1	9/10/2018 3:56:35 PM	39959
Iron	3.9	0.051	0.10	*	mg/L	5	9/10/2018 6:44:09 PM	39959
Manganese	0.57	0.0011	0.0020	*	mg/L	1	9/10/2018 3:56:35 PM	39959
Silver	0.0022	0.0012	0.0050	J	mg/L	1	9/10/2018 6:42:11 PM	39959
Zinc	0.010	0.0033	0.010		mg/L	1	9/10/2018 3:56:35 PM	39959
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	8/28/2018 11:44:52 AM	B53766
Lead	ND	0.00017	0.00050		mg/L	1	8/28/2018 11:44:52 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/28/2018 11:44:52 AM	B53766
Uranium	0.0083	0.000096	0.00050		mg/L	1	8/28/2018 11:44:52 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	8/27/2018 1:00:45 PM	39959
Lead	0.0022	0.00023	0.00050		mg/L	1	8/27/2018 1:00:45 PM	39959
Selenium	ND	0.00098	0.0010		mg/L	1	8/27/2018 1:00:45 PM	39959
Uranium	0.0085	0.000068	0.00050		mg/L	1	8/28/2018 9:26:08 AM	39959
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000051	0.000038	0.00020	J	mg/L	1	9/11/2018 12:27:26 PM	40248
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Benzoic acid	7.0	6.3	20	J	µg/L	1	9/4/2018 3:19:47 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/4/2018 3:19:47 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/4/2018 3:19:47 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/4/2018 3:19:47 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/4/2018 3:19:47 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/4/2018 3:19:47 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/4/2018 3:19:47 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/4/2018 3:19:47 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/4/2018 3:19:47 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/4/2018 3:19:47 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/4/2018 3:19:47 PM	39989
Surr: 2-Fluorophenol	39.2	0	15-74.1		%Rec	1	9/4/2018 3:19:47 PM	39989
Surr: Phenol-d5	33.6	0	15-59.8		%Rec	1	9/4/2018 3:19:47 PM	39989
Surr: 2,4,6-Tribromophenol	67.6	0	22.1-112		%Rec	1	9/4/2018 3:19:47 PM	39989
Surr: Nitrobenzene-d5	54.7	0	33.2-94		%Rec	1	9/4/2018 3:19:47 PM	39989
Surr: 2-Fluorobiphenyl	62.5	0	34-90.9		%Rec	1	9/4/2018 3:19:47 PM	39989
Surr: 4-Terphenyl-d14	75.6	0	15-149		%Rec	1	9/4/2018 3:19:47 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Methyl tert-butyl ether (MTBE)	4.4	0.32	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 8:16:12 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 8:16:12 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 8:16:12 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 8:16:12 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 8:16:12 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 8:16:12 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 8:16:12 PM	W5366
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	8/23/2018 8:16:12 PM	W5366
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	8/23/2018 8:16:12 PM	W5366
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	8/23/2018 8:16:12 PM	W5366
Surr: Toluene-d8	99.5	0	70-130		%Rec	1	8/23/2018 8:16:12 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP02
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/20/2018
Lab ID: 1808D32-009
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.020	0.0097	0.050	J	mg/L	1	8/23/2018 8:16:12 PM	G53662
Surr: BFB	102	0	70-130		%Rec	1	8/23/2018 8:16:12 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808D32-010
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Acetone	ND	0.79	10		µg/L	1	8/23/2018 4:50:39 PM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/23/2018 4:50:39 PM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/23/2018 4:50:39 PM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808D32-010
Matrix: AQUEOUS
Received Date: 8/22/2018 9:05:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/23/2018 4:50:39 PM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/23/2018 4:50:39 PM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/23/2018 4:50:39 PM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/23/2018 4:50:39 PM	W5366
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	8/23/2018 4:50:39 PM	W5366
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	8/23/2018 4:50:39 PM	W5366
Surr: Dibromofluoromethane	110	0	70-130		%Rec	1	8/23/2018 4:50:39 PM	W5366
Surr: Toluene-d8	102	0	70-130		%Rec	1	8/23/2018 4:50:39 PM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.022	0.0097	0.050	J	mg/L	1	8/23/2018 4:50:39 PM	G53662
Surr: BFB	105	0	70-130		%Rec	1	8/23/2018 4:50:39 PM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	111	50	150			
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Calcium	0.59	1.0	0.5000	0	119	50	150			J
Chromium	0.0054	0.0060	0.006000	0	89.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	97.3	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Potassium	0.47	1.0	0.5000	0	94.9	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Sodium	0.54	1.0	0.5000	0	107	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	105	85	115			
Calcium	49	1.0	50.00	0	97.3	85	115			
Chromium	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.48	0.020	0.5000	0	97.0	85	115			
Magnesium	48	1.0	50.00	0	97.0	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Potassium	49	1.0	50.00	0	97.9	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-39959**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **39959**	RunNo: **53753**
Prep Date: **8/23/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774417** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-39959**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **39959**	RunNo: **53753**
Prep Date: **8/23/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774418** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0056	0.0060	0.006000	0	93.7	50	150			J
Copper	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.018	0.020	0.02000	0	89.0	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0048	0.0050	0.005000	0	95.2	50	150			J
Zinc	0.0066	0.010	0.005000	0	132	50	150			J

Sample ID **LCS-39959**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **39959**	RunNo: **53753**
Prep Date: **8/23/2018**	Analysis Date: **8/28/2018**	SeqNo: **1774419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.8	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Silver	0.097	0.0050	0.1000	0	96.6	85	115			
Zinc	0.49	0.010	0.5000	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**B53766**	RunNo:	**53766**
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773831** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B53766**	RunNo:	**53766**
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Selenium	0.00092	0.0010	0.001000	0	91.9	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.6	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B53766**	RunNo:	**53766**
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-39959**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**39959**	RunNo:	**53684**					
Prep Date:	**8/23/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770864**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-39959**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**39959**	RunNo:	**53684**					
Prep Date:	**8/23/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770865**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00087	0.0010	0.001000	0	86.6	50	150			J
Lead	0.00044	0.00050	0.0005000	0	89.0	50	150			J
Selenium	0.00094	0.0010	0.001000	0	94.0	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.1	50	150			J

Sample ID	**MSLCS-39959**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**39959**	RunNo:	**53684**					
Prep Date:	**8/23/2018**	Analysis Date:	**8/24/2018**	SeqNo:	**1770866**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.4	85	115			
Lead	0.012	0.00050	0.01250	0	92.1	85	115			
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			
Uranium	0.012	0.00050	0.01250	0	93.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40248**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40248**			RunNo: **54068**					
Prep Date:	**9/10/2018**	Analysis Date: **9/11/2018**			SeqNo: **1786489**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40248**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40248**			RunNo: **54068**					
Prep Date:	**9/10/2018**	Analysis Date: **9/11/2018**			SeqNo: **1786490**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	80	120			

Sample ID	**1808D32-001GMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB02**	Batch ID: **40248**			RunNo: **54068**					
Prep Date:	**9/10/2018**	Analysis Date: **9/11/2018**			SeqNo: **1786492**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	75	125			

Sample ID	**1808D32-001GMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB02**	Batch ID: **40248**			RunNo: **54068**					
Prep Date:	**9/10/2018**	Analysis Date: **9/11/2018**			SeqNo: **1786493**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	0	90.7	75	125	7.01	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53622**	RunNo: **53622**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53622**	RunNo: **53622**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769346** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.9	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.8	90	110			
Bromide	2.4	0.10	2.500	0	96.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.8	90	110			
Sulfate	9.4	0.50	10.00	0	94.3	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A53658**	RunNo: **53658**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769547** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.19	0.50								J
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.25	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53658**	RunNo: **53658**
Prep Date:	Analysis Date: **8/22/2018**	SeqNo: **1769548** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.58	0.10	0.5000	0	115	90	110			S
Chloride	4.7	0.50	5.000	0	93.6	90	110			
Bromide	2.4	0.10	2.500	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	90	110			
Sulfate	9.2	0.50	10.00	0	92.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53923**	RunNo: **53923**
Prep Date:	Analysis Date: **9/4/2018**	SeqNo: **1779699** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53923**	RunNo: **53923**
Prep Date:	Analysis Date: **9/4/2018**	SeqNo: **1779700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.7	0.20	3.500	0	105	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53942**	RunNo: **53942**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53942**	RunNo: **53942**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780407** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.8	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-39946**	SampType:	**LCS**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**LCSW**	Batch ID:	**39946**		RunNo:	**53696**				
Prep Date:	**8/23/2018**	Analysis Date:	**8/23/2018**		SeqNo:	**1771169**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.076	0.010	0.1000	0	76.0	70	130			

Sample ID	**MB-39946**	SampType:	**MBLK**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**PBW**	Batch ID:	**39946**		RunNo:	**53696**				
Prep Date:	**8/23/2018**	Analysis Date:	**8/23/2018**		SeqNo:	**1771170**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**1808D32-001CMS**	SampType:	**MS**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**FB02**	Batch ID:	**39946**		RunNo:	**53696**				
Prep Date:	**8/23/2018**	Analysis Date:	**8/23/2018**		SeqNo:	**1771176**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.070	0.0094	0.09358	0	74.5	55	125			

Sample ID	**1808D32-001CMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8011/504.1: EDB**				
Client ID:	**FB02**	Batch ID:	**39946**		RunNo:	**53696**				
Prep Date:	**8/23/2018**	Analysis Date:	**8/23/2018**		SeqNo:	**1771177**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.059	0.0093	0.09333	0	62.7	55	125	17.5	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-39971**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **39971**	RunNo: **53723**
Prep Date: **8/24/2018**	Analysis Date: **8/27/2018**	SeqNo: **1772395** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		122	76.7	135			

Sample ID **LCS-39971**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **39971**	RunNo: **53723**
Prep Date: **8/24/2018**	Analysis Date: **8/27/2018**	SeqNo: **1772396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.55		0.5000		109	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770161** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770161** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770162** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.0	70	130			
Toluene	18	1.0	20.00	0	90.4	70	130			
Chlorobenzene	18	1.0	20.00	0	88.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770162** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID **1808d32-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-30**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1770166** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	60.5	137			
Toluene	19	1.0	20.00	0	95.6	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	27	1.0	20.00	4.827	110	70	130			
Trichloroethene (TCE)	24	1.0	20.00	3.696	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	70	130			

Sample ID **1808d32-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-30**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1770167** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.4	60.5	137	5.11	20	
Toluene	19	1.0	20.00	0	94.5	70	130	1.19	20	
Chlorobenzene	19	1.0	20.00	0	96.8	70	130	4.66	20	
1,1-Dichloroethene	26	1.0	20.00	4.827	106	70	130	2.46	20	
Trichloroethene (TCE)	23	1.0	20.00	3.696	97.2	70	130	3.73	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		101	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		96.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53709**	RunNo: **53709**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771757** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	19	1.0	20.00	0	96.8	70	130			
Chlorobenzene	20	1.0	20.00	0	98.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53709**	RunNo: **53709**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53709**	RunNo: **53709**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53709**	RunNo: **53709**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771769** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53711**	RunNo: **53711**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771872** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53711**	RunNo: **53711**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771873** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808D32-004CMS**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782598** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	55.6	15	123			
4-Chloro-3-methylphenol	130	10	200.0	0	67.1	26.6	118			
2-Chlorophenol	110	10	200.0	0	57.2	15	120			
1,4-Dichlorobenzene	55	10	100.0	0	55.2	19	108			
2,4-Dinitrotoluene	57	10	100.0	0	57.1	27.8	103			
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.0	32.3	126			
4-Nitrophenol	90	10	200.0	0	45.0	15	72.1			
Pentachlorophenol	140	20	200.0	0	69.3	15	114			
Phenol	53	10	200.0	0	26.7	15	67.5			
Pyrene	77	10	100.0	0	77.4	31.2	112			
1,2,4-Trichlorobenzene	67	10	100.0	0	67.1	22.1	123			
Surr: 2-Fluorophenol	75		200.0		37.4	15	74.1			
Surr: Phenol-d5	58		200.0		29.1	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		68.4	22.1	112			
Surr: Nitrobenzene-d5	62		100.0		61.6	33.2	94			
Surr: 2-Fluorobiphenyl	57		100.0		56.5	34	90.9			
Surr: 4-Terphenyl-d14	72		100.0		72.5	15	149			

Sample ID **1808D32-004CMSD**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782599** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	61.7	15	123	10.4	30.5	
4-Chloro-3-methylphenol	140	10	200.0	0	68.6	26.6	118	2.21	50	
2-Chlorophenol	110	10	200.0	0	57.2	15	120	0.0525	36.3	
1,4-Dichlorobenzene	58	10	100.0	0	58.4	19	108	5.53	42.1	
2,4-Dinitrotoluene	58	10	100.0	0	57.7	27.8	103	1.15	28.5	
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.2	32.3	126	1.19	25.4	
4-Nitrophenol	50	10	200.0	0	25.0	15	72.1	57.3	50	R
Pentachlorophenol	120	20	200.0	0	62.2	15	114	10.7	50	
Phenol	63	10	200.0	0	31.7	15	67.5	17.0	46.1	
Pyrene	74	10	100.0	0	73.6	31.2	112	4.95	34.3	
1,2,4-Trichlorobenzene	67	10	100.0	0	67.3	22.1	123	0.327	43.6	
Surr: 2-Fluorophenol	84		200.0		42.0	15	74.1	0	0	
Surr: Phenol-d5	68		200.0		33.9	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		68.1	22.1	112	0	0	
Surr: Nitrobenzene-d5	64		100.0		63.8	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	62		100.0		61.6	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808D32-004CMSD** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29** Batch ID: **39989** RunNo: **53982**
Prep Date: **8/27/2018** Analysis Date: **9/6/2018** SeqNo: **1782599** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	72		100.0		71.9	15	149	0	0	

Sample ID **lcs-39989** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **39989** RunNo: **53982**
Prep Date: **8/27/2018** Analysis Date: **9/6/2018** SeqNo: **1782616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.6	55.1	104			
4-Chloro-3-methylphenol	180	10	200.0	0	90.2	57	115			
2-Chlorophenol	170	10	200.0	0	85.9	43.4	112			
1,4-Dichlorobenzene	76	10	100.0	0	76.1	38	95.2			
2,4-Dinitrotoluene	69	10	100.0	0	69.4	55.1	96.7			
N-Nitrosodi-n-propylamine	91	10	100.0	0	90.9	55	112			
4-Nitrophenol	140	10	200.0	0	69.6	16.6	93			
Pentachlorophenol	160	20	200.0	0	79.4	43.2	104			
Phenol	130	10	200.0	0	64.7	21.3	85.7			
Pyrene	89	10	100.0	0	89.1	64.9	105			
1,2,4-Trichlorobenzene	87	10	100.0	0	87.3	42.6	107			
Surr: 2-Fluorophenol	140		200.0		70.0	15	74.1			
Surr: Phenol-d5	140		200.0		68.4	15	59.8			S
Surr: 2,4,6-Tribromophenol	160		200.0		80.8	22.1	112			
Surr: Nitrobenzene-d5	85		100.0		85.4	33.2	94			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	34	90.9			
Surr: 4-Terphenyl-d14	89		100.0		89.2	15	149			

Sample ID **mb-39989** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **39989** RunNo: **53982**
Prep Date: **8/27/2018** Analysis Date: **9/6/2018** SeqNo: **1782619** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39989**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782619** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	7.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39989**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782619** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		76.4	15	74.1			S
Surr: Phenol-d5	150		200.0		75.3	15	59.8			S
Surr: 2,4,6-Tribromophenol	180		200.0		88.9	22.1	112			
Surr: Nitrobenzene-d5	90		100.0		90.1	33.2	94			
Surr: 2-Fluorobiphenyl	85		100.0		85.3	34	90.9			
Surr: 4-Terphenyl-d14	89		100.0		89.0	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808D32**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770201** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.016	0.050								J
Surr: BFB	10		10.00		100	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	102	70	130			
Surr: BFB	9.7		10.00		97.1	70	130			

Sample ID **1808d32-004a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-29**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1770207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0.02080	91.8	63.4	130			
Surr: BFB	9.5		10.00		95.1	70	130			

Sample ID **1808d32-004a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-29**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1770208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0.02080	88.8	63.4	130	3.13	20	
Surr: BFB	9.9		10.00		99.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808D32 RcptNo: 1

Received By: Jazzmine Burkhead 8/22/2018 11:01:48 AM

Completed By: Anne Thorne 8/22/2018 11:11:14 AM

Reviewed By: 08/22/18

Labeled by: AT | 08/22/18 | 08/22/18 ENM 8/22/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 27 (<2 or >12 unless noted)

Adjusted? NO

Checked by: ENM / 8/22/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: Custody Seals intact on all sample bottles | AT 08 | 22/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			
2	2.3	Good	Yes			
3	4.6	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 808032	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1010	H_2O	FB02	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	001					X											
				1 Liter Amber -1	Neat	001											X					
				250 ml Amber-1	Neat	001			X													
				250 ml Plastic-1	HNO_3	001												X				
				125 ml Plastic-1	HNO_3	001												X	X			
				125 ml Plastic-1	H_2SO_4	001													X			
				125 ml Plastic-1	Neat	001													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	0700			08/22/18	09:08
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler #1 - 1.3
Cooler #2 - 2.3
Cooler #3 - 4.6

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808032	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/21/18	1035	H_2O	EB 02	40ml VOA-5	HCl	002			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber 1	Neat	002											X					
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	002												X				
				125 ml Plastic-1	HNO_3	002												X	X			
				125 ml Plastic-1	H_2SO_4	002													X			
				125 ml Plastic-1	Neat	002													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	0900
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3

Cooler #2 - 2.3

Cooler #3 - 4.C

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1100	H_2O	MKTF-30	40ml VOA-5	HCl	003			X							X						
				40ml VOA-3	$Na_2S_2O_3$	003					X											
				1 Liter Amber -1	Neat	003											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	003												X	X			
				125 ml Plastic-1	H_2SO_4	003													X			
				125 ml Plastic-1	Neat	003													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1335	H_2O	MKTF-29	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -2	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time
				08/22/18	

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB [redacted] (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1430	H_2O	MKTF-24	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$	-005					X											
				1 Liter Amber -	Neat	-005											X					
				250 ml Amber-1	Neat	-005			X													
				250 ml Plastic-1	HNO_3	-005												X				
				125 ml Plastic-1	HNO_3	-005												X	X			
				125 ml Plastic-1	H_2SO_4	-005													X			
				125 ml Plastic-1	Neat	-005													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	09:05
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1510	H_2O	MKTF-02	40ml VOA-5	HCl	006			X							X						
				40ml VOA-3	$Na_2S_2O_3$	006					X											
				1 Liter Amber -	Neat	006											X					
				250 ml Amber-1	Neat	006			X													
				250 ml Plastic-1	HNO_3	006												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700		Brenda Bunkley	08/22/18	09:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1550	H_2O	MKTF-28	40ml VOA-5	HCl	207			X							X						
				1 Liter Amber -1	Neat	207											X						
				250 ml Amber-1	Neat	207			X														
				250 ml Plastic-1	HNO_3	207												X					
				125 ml Plastic-1	HNO_3	207												X	X				
				125 ml Plastic-1	H_2SO_4	207													X				
				125 ml Plastic-1	Neat	207													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	09:09
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808D32	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	1625	H_2O	MKTF-27	40ml VOA-5	HCl	008			X							X						
				40ml VOA-3	$Na_2S_2O_3$	008					X											
				1 Liter Amber -1	Neat	008											X					
				250 ml Amber-1	Neat	008			X													
				250 ml Plastic-1	HNO_3	008												X				
				125 ml Plastic-1	HNO_3	008												X	X			
				125 ml Plastic-1	H_2SO_4	008													X			
				125 ml Plastic-1	Neat	008													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	09:05
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808032	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/20/18	—	H_2O	DUP02	40ml VOA-5	HCl	009			X							X						
				1 Liter Amber -1	Neat	009											X					
				250 ml Amber-1	Neat	009			X													
				250 ml Plastic-1	HNO_3	009												X				
				125 ml Plastic-1	HNO_3	009												X	X			
				125 ml Plastic-1	H_2SO_4	009													X			
				125 ml Plastic-1	Neat	009													X			
8/20/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	010										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/21/18	0700			08/22/18	09:0
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Cooler #1 - 1.3 Cooler #3 - 4.6

Cooler #2 - 2.3

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808E67

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808E67**
Date Reported: **9/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/27/2018 11:45:06 PM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/27/2018 11:45:06 PM	39971
Surr: DNOP	130	0	76.7-135		%Rec	1	8/27/2018 11:45:06 PM	39971
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/23/2018 2:04:34 PM	R53678
Chloride	0.23	0.029	0.50	J	mg/L	1	8/23/2018 2:04:34 PM	R53678
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/23/2018 2:04:34 PM	R53678
Bromide	ND	0.027	0.10		mg/L	1	8/23/2018 2:04:34 PM	R53678
Nitrogen, Nitrate (As N)	0.58	0.0066	0.10		mg/L	1	8/23/2018 2:04:34 PM	R53678
Phosphorus, Orthophosphate (As P)	0.26	0.093	0.50	J	mg/L	1	8/23/2018 2:04:34 PM	R53678
Sulfate	1.1	0.21	0.50		mg/L	1	8/23/2018 2:04:34 PM	R53678
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 4:39:11 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 4:39:11 PM	C54078
Calcium	ND	0.078	1.0		mg/L	1	9/11/2018 4:39:11 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 4:39:11 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 4:39:11 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 4:39:11 PM	C54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 4:39:11 PM	C54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 4:39:11 PM	C54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 4:39:11 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 4:39:11 PM	C54078
Sodium	ND	0.16	1.0		mg/L	1	9/11/2018 4:39:11 PM	C54078
Zinc	0.0077	0.0021	0.010	J	mg/L	1	9/11/2018 4:39:11 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	8/31/2018 2:26:21 PM	40015
Cadmium	ND	0.00058	0.0020		mg/L	1	8/31/2018 2:26:21 PM	40015
Chromium	ND	0.0018	0.0060		mg/L	1	9/4/2018 7:53:04 PM	40015
Copper	ND	0.0041	0.0060		mg/L	1	8/31/2018 2:26:21 PM	40015
Iron	ND	0.010	0.020		mg/L	1	8/31/2018 2:26:21 PM	40015
Manganese	ND	0.0011	0.0020		mg/L	1	8/31/2018 2:26:21 PM	40015
Silver	ND	0.0012	0.0050		mg/L	1	8/31/2018 2:26:21 PM	40015
Zinc	ND	0.0033	0.010		mg/L	1	8/31/2018 2:26:21 PM	40015
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/27/2018 10:18:26 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 10:18:26 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 10:18:26 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	ND	0.000096	0.00050		mg/L	1	8/27/2018 10:18:26 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/29/2018 3:21:41 PM	40015
Lead	ND	0.00023	0.00050		mg/L	1	8/29/2018 3:21:41 PM	40015
Selenium	ND	0.00098	0.0010		mg/L	1	8/29/2018 3:21:41 PM	40015
Uranium	ND	0.000068	0.00050		mg/L	1	8/29/2018 3:21:41 PM	40015
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/8/2018 5:31:33 PM	40221
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Benzoic acid	7.6	6.3	20	J	µg/L	1	9/4/2018 4:18:39 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/4/2018 4:18:39 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/4/2018 4:18:39 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/4/2018 4:18:39 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/4/2018 4:18:39 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/4/2018 4:18:39 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/4/2018 4:18:39 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/4/2018 4:18:39 PM	39989
Surr: 2-Fluorophenol	32.2	0	15-74.1		%Rec	1	9/4/2018 4:18:39 PM	39989
Surr: Phenol-d5	26.1	0	15-59.8		%Rec	1	9/4/2018 4:18:39 PM	39989
Surr: 2,4,6-Tribromophenol	62.7	0	22.1-112		%Rec	1	9/4/2018 4:18:39 PM	39989
Surr: Nitrobenzene-d5	48.8	0	33.2-94		%Rec	1	9/4/2018 4:18:39 PM	39989
Surr: 2-Fluorobiphenyl	52.1	0	34-90.9		%Rec	1	9/4/2018 4:18:39 PM	39989
Surr: 4-Terphenyl-d14	81.5	0	15-149		%Rec	1	9/4/2018 4:18:39 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Toluene	0.48	0.17	1.0	J	µg/L	1	8/24/2018 1:37:38 AM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Acetone	ND	0.79	10		µg/L	1	8/24/2018 1:37:38 AM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 1:37:38 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 1:37:38 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 1:37:38 AM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 1:37:38 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/24/2018 1:37:38 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 1:37:38 AM	W5366
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/24/2018 1:37:38 AM	W5366
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	8/24/2018 1:37:38 AM	W5366
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	8/24/2018 1:37:38 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:30:00 PM
Lab ID: 1808E67-001
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	8/24/2018 1:37:38 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.021	0.0097	0.050	J	mg/L	1	8/24/2018 1:37:38 AM	G5366
Surr: BFB	101	0	70-130		%Rec	1	8/24/2018 1:37:38 AM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 12:09:23 AM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 12:09:23 AM	39971
Surr: DNOP	129	0	76.7-135		%Rec	1	8/28/2018 12:09:23 AM	39971
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/23/2018 2:30:16 PM	R53678
Chloride	0.23	0.029	0.50	J	mg/L	1	8/23/2018 2:30:16 PM	R53678
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/23/2018 2:30:16 PM	R53678
Bromide	ND	0.027	0.10		mg/L	1	8/23/2018 2:30:16 PM	R53678
Nitrogen, Nitrate (As N)	0.050	0.0066	0.10	J	mg/L	1	8/23/2018 2:30:16 PM	R53678
Phosphorus, Orthophosphate (As P)	0.26	0.093	0.50	J	mg/L	1	8/23/2018 2:30:16 PM	R53678
Sulfate	ND	0.21	0.50		mg/L	1	8/23/2018 2:30:16 PM	R53678
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 4:45:38 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 4:45:38 PM	C54078
Calcium	ND	0.078	1.0		mg/L	1	9/11/2018 4:45:38 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 4:45:38 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 4:45:38 PM	C54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 4:45:38 PM	C54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 4:45:38 PM	C54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 4:45:38 PM	C54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 4:45:38 PM	C54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 4:45:38 PM	C54078
Sodium	0.72	0.16	1.0	J	mg/L	1	9/11/2018 4:45:38 PM	C54078
Zinc	0.018	0.0021	0.010		mg/L	1	9/11/2018 4:45:38 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	8/31/2018 2:32:24 PM	40015
Cadmium	ND	0.00058	0.0020		mg/L	1	8/31/2018 2:32:24 PM	40015
Chromium	ND	0.0018	0.0060		mg/L	1	9/4/2018 7:59:28 PM	40015
Copper	ND	0.0041	0.0060		mg/L	1	8/31/2018 2:32:24 PM	40015
Iron	ND	0.010	0.020		mg/L	1	8/31/2018 2:32:24 PM	40015
Manganese	ND	0.0011	0.0020		mg/L	1	8/31/2018 2:32:24 PM	40015
Silver	ND	0.0012	0.0050		mg/L	1	8/31/2018 2:32:24 PM	40015
Zinc	ND	0.0033	0.010		mg/L	1	8/31/2018 2:32:24 PM	40015
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/27/2018 10:20:50 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 10:20:50 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 10:20:50 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	ND	0.000096	0.00050		mg/L	1	8/27/2018 10:20:50 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	8/29/2018 3:28:46 PM	40015
Lead	ND	0.00023	0.00050		mg/L	1	8/29/2018 3:28:46 PM	40015
Selenium	ND	0.00098	0.0010		mg/L	1	8/29/2018 3:28:46 PM	40015
Uranium	ND	0.000068	0.00050		mg/L	1	8/29/2018 3:28:46 PM	40015
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	9/8/2018 5:43:49 PM	40221
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Benzoic acid	6.7	6.3	20	J	µg/L	1	9/4/2018 4:48:11 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/4/2018 4:48:11 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/4/2018 4:48:11 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/4/2018 4:48:11 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/4/2018 4:48:11 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/4/2018 4:48:11 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/4/2018 4:48:11 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/4/2018 4:48:11 PM	39989
Surr: 2-Fluorophenol	41.1	0	15-74.1		%Rec	1	9/4/2018 4:48:11 PM	39989
Surr: Phenol-d5	33.0	0	15-59.8		%Rec	1	9/4/2018 4:48:11 PM	39989
Surr: 2,4,6-Tribromophenol	60.1	0	22.1-112		%Rec	1	9/4/2018 4:48:11 PM	39989
Surr: Nitrobenzene-d5	60.8	0	33.2-94		%Rec	1	9/4/2018 4:48:11 PM	39989
Surr: 2-Fluorobiphenyl	57.6	0	34-90.9		%Rec	1	9/4/2018 4:48:11 PM	39989
Surr: 4-Terphenyl-d14	78.2	0	15-149		%Rec	1	9/4/2018 4:48:11 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Toluene	0.39	0.17	1.0	J	µg/L	1	8/24/2018 2:06:42 AM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Acetone	4.8	0.79	10	J	µg/L	1	8/24/2018 12:37:00 PM	R53711
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 2:06:42 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 2:06:42 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 2:06:42 AM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 2:06:42 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/24/2018 2:06:42 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 2:06:42 AM	W5366
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	8/24/2018 2:06:42 AM	W5366
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	8/24/2018 2:06:42 AM	W5366
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	8/24/2018 2:06:42 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 2:50:00 PM
Lab ID: 1808E67-002
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	98.6	0	70-130		%Rec	1	8/24/2018 2:06:42 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.021	0.0097	0.050	J	mg/L	1	8/24/2018 2:06:42 AM	G5366
Surr: BFB	97.8	0	70-130		%Rec	1	8/24/2018 2:06:42 AM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003 **Matrix:** AQUEOUS **Received Date:** 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 12:33:46 AM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 12:33:46 AM	39971
Surr: DNOP	131	0	76.7-135		%Rec	1	8/28/2018 12:33:46 AM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.80	0.15	0.50		mg/L	5	8/31/2018 3:45:10 PM	R53881
Chloride	370	0.59	10		mg/L	20	8/23/2018 3:08:52 PM	R53678
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/23/2018 2:56:00 PM	R53678
Bromide	1.1	0.13	0.50		mg/L	5	8/23/2018 2:56:00 PM	R53678
Nitrogen, Nitrate (As N)	1.9	0.033	0.50		mg/L	5	8/23/2018 2:56:00 PM	R53678
Phosphorus, Orthophosphate (As P)	1.6	0.46	2.5	J	mg/L	5	8/23/2018 2:56:00 PM	R53678
Sulfate	300	4.1	10		mg/L	20	8/23/2018 3:08:52 PM	R53678
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.043	0.00099	0.0020		mg/L	1	9/11/2018 4:51:34 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 4:51:34 PM	C54078
Calcium	190	0.39	5.0		mg/L	5	9/11/2018 4:58:03 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 4:51:34 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 4:51:34 PM	C54078
Iron	0.037	0.016	0.020		mg/L	1	9/11/2018 4:51:34 PM	C54078
Magnesium	35	0.25	1.0		mg/L	1	9/11/2018 4:51:34 PM	C54078
Manganese	2.2	0.0020	0.010	*	mg/L	5	9/11/2018 4:58:03 PM	C54078
Potassium	0.65	0.11	1.0	J	mg/L	1	9/11/2018 4:51:34 PM	C54078
Silver	0.0040	0.0018	0.0050	J	mg/L	1	9/11/2018 4:51:34 PM	C54078
Sodium	360	0.82	5.0		mg/L	5	9/11/2018 4:58:03 PM	C54078
Zinc	0.010	0.0021	0.010		mg/L	1	9/11/2018 4:51:34 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.18	0.0010	0.0020		mg/L	1	8/31/2018 2:34:36 PM	40015
Cadmium	ND	0.00058	0.0020		mg/L	1	8/31/2018 2:34:36 PM	40015
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	9/4/2018 8:01:41 PM	40015
Copper	ND	0.0041	0.0060		mg/L	1	8/31/2018 2:34:36 PM	40015
Iron	2.8	0.051	0.10	*	mg/L	5	9/4/2018 8:03:40 PM	40015
Manganese	3.0	0.0055	0.010	*	mg/L	5	9/4/2018 8:03:40 PM	40015
Silver	0.0050	0.0012	0.0050	J	mg/L	1	8/31/2018 2:34:36 PM	40015
Zinc	0.011	0.0033	0.010		mg/L	1	8/31/2018 2:34:36 PM	40015
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	8/27/2018 10:23:13 AM	B53710
Lead	ND	0.00087	0.0025		mg/L	5	8/28/2018 10:47:33 AM	B53766
Selenium	0.00076	0.00076	0.0010	J	mg/L	1	8/27/2018 10:23:13 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.027	0.00048	0.0025		mg/L	5	8/28/2018 10:47:33 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0029	0.00041	0.0010		mg/L	1	8/29/2018 3:31:09 PM	40015
Lead	0.0026	0.00023	0.00050		mg/L	1	8/29/2018 3:31:09 PM	40015
Selenium	ND	0.00098	0.0010		mg/L	1	8/29/2018 3:31:09 PM	40015
Uranium	0.028	0.00034	0.0025		mg/L	5	8/30/2018 11:13:51 AM	40015
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000061	0.000038	0.00020	J	mg/L	1	9/8/2018 5:46:07 PM	40221
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Benzoic acid	8.6	6.3	20	J	µg/L	1	9/4/2018 5:17:39 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/4/2018 5:17:39 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/4/2018 5:17:39 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/4/2018 5:17:39 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/4/2018 5:17:39 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/4/2018 5:17:39 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/4/2018 5:17:39 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/4/2018 5:17:39 PM	39989
Surr: 2-Fluorophenol	40.5	0	15-74.1		%Rec	1	9/4/2018 5:17:39 PM	39989
Surr: Phenol-d5	34.6	0	15-59.8		%Rec	1	9/4/2018 5:17:39 PM	39989
Surr: 2,4,6-Tribromophenol	71.1	0	22.1-112		%Rec	1	9/4/2018 5:17:39 PM	39989
Surr: Nitrobenzene-d5	60.8	0	33.2-94		%Rec	1	9/4/2018 5:17:39 PM	39989
Surr: 2-Fluorobiphenyl	61.9	0	34-90.9		%Rec	1	9/4/2018 5:17:39 PM	39989
Surr: 4-Terphenyl-d14	76.4	0	15-149		%Rec	1	9/4/2018 5:17:39 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Methyl tert-butyl ether (MTBE)	0.36	0.32	1.0	J	µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Acetone	3.7	0.79	10	J	µg/L	1	8/24/2018 1:01:00 PM	R53711
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 2:35:52 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 2:35:52 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 2:35:52 AM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 2:35:52 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/24/2018 2:35:52 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 2:35:52 AM	W5366
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	8/24/2018 2:35:52 AM	W5366
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	8/24/2018 2:35:52 AM	W5366
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	8/24/2018 2:35:52 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-38
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 3:25:00 PM
Lab ID: 1808E67-003
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	103	0	70-130		%Rec	1	8/24/2018 2:35:52 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.025	0.0097	0.050	J	mg/L	1	8/24/2018 2:35:52 AM	G5366
Surr: BFB	101	0	70-130		%Rec	1	8/24/2018 2:35:52 AM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	11	0.63	1.0		mg/L	1	8/28/2018 12:58:02 AM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 12:58:02 AM	39971
Surr: DNOP	132	0	76.7-135		%Rec	1	8/28/2018 12:58:02 AM	39971
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.28	0.15	0.50	J	mg/L	5	8/23/2018 3:21:43 PM	R53678
Chloride	1600	5.9	100		mg/L	200	8/31/2018 3:58:02 PM	R53881
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/23/2018 3:21:43 PM	R53678
Bromide	1.0	0.13	0.50		mg/L	5	8/23/2018 3:21:43 PM	R53678
Nitrogen, Nitrate (As N)	0.20	0.033	0.50	J	mg/L	5	8/23/2018 3:21:43 PM	R53678
Phosphorus, Orthophosphate (As P)	3.1	0.46	2.5		mg/L	5	8/23/2018 3:21:43 PM	R53678
Sulfate	1.1	1.0	2.5	J	mg/L	5	8/23/2018 3:21:43 PM	R53678
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	11	0.020	0.040	*	mg/L	20	9/11/2018 6:41:45 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:06:53 PM	C54078
Calcium	180	0.39	5.0		mg/L	5	9/11/2018 5:08:54 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:06:53 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:06:53 PM	C54078
Iron	11	0.33	0.40	*	mg/L	20	9/11/2018 6:41:45 PM	C54078
Magnesium	55	0.25	1.0		mg/L	1	9/11/2018 5:06:53 PM	C54078
Manganese	2.0	0.0020	0.010	*	mg/L	5	9/11/2018 5:08:54 PM	C54078
Potassium	5.2	0.11	1.0		mg/L	1	9/11/2018 5:06:53 PM	C54078
Silver	0.0030	0.0018	0.0050	J	mg/L	1	9/11/2018 5:06:53 PM	C54078
Sodium	1300	3.3	20		mg/L	20	9/11/2018 6:41:45 PM	C54078
Zinc	0.010	0.0021	0.010		mg/L	1	9/11/2018 5:06:53 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	11	0.020	0.040	*	mg/L	20	9/4/2018 8:18:04 PM	40015
Cadmium	ND	0.00058	0.0020		mg/L	1	8/31/2018 2:36:37 PM	40015
Chromium	ND	0.0018	0.0060		mg/L	1	9/4/2018 8:05:50 PM	40015
Copper	0.0048	0.0041	0.0060	J	mg/L	1	8/31/2018 2:36:37 PM	40015
Iron	12	0.20	0.40	*	mg/L	20	9/4/2018 8:18:04 PM	40015
Manganese	2.2	0.0055	0.010	*	mg/L	5	9/4/2018 8:16:04 PM	40015
Silver	0.0043	0.0012	0.0050	J	mg/L	1	8/31/2018 2:36:37 PM	40015
Zinc	0.0065	0.0033	0.010	J	mg/L	1	8/31/2018 2:36:37 PM	40015
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	8/28/2018 10:49:58 AM	B53766
Lead	ND	0.00087	0.0025		mg/L	5	8/28/2018 10:49:58 AM	B53766
Selenium	ND	0.0038	0.0050		mg/L	5	8/28/2018 10:49:58 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	ND	0.00048	0.0025		mg/L	5	8/28/2018 10:49:58 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0029	0.0021	0.0050	J	mg/L	5	8/30/2018 11:16:14 AM	40015
Lead	0.0033	0.0011	0.0025		mg/L	5	8/30/2018 11:16:14 AM	40015
Selenium	ND	0.0049	0.0050		mg/L	5	8/30/2018 11:16:14 AM	40015
Uranium	0.00055	0.00034	0.0025	J	mg/L	5	8/30/2018 11:16:14 AM	40015
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000067	0.000038	0.00020	J	mg/L	1	9/8/2018 5:48:18 PM	40221
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzoic acid	ND	6.3	20		µg/L	1	9/6/2018 1:12:09 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Carbazole	10	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Fluorene	9.9	6.3	10	J	µg/L	1	9/6/2018 1:12:09 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 1:12:09 PM	39989
1-Methylnaphthalene	120	7.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Methylnaphthalene	53	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 1:12:09 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 1:12:09 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Naphthalene	57	5.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 1:12:09 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 1:12:09 PM	39989
Phenanthrene	9.6	6.0	10	J	µg/L	1	9/6/2018 1:12:09 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 1:12:09 PM	39989
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 1:12:09 PM	39989
Surr: 2-Fluorophenol	25.7	0	15-74.1		%Rec	1	9/6/2018 1:12:09 PM	39989
Surr: Phenol-d5	32.5	0	15-59.8		%Rec	1	9/6/2018 1:12:09 PM	39989
Surr: 2,4,6-Tribromophenol	43.4	0	22.1-112		%Rec	1	9/6/2018 1:12:09 PM	39989
Surr: Nitrobenzene-d5	65.3	0	33.2-94		%Rec	1	9/6/2018 1:12:09 PM	39989
Surr: 2-Fluorobiphenyl	60.2	0	34-90.9		%Rec	1	9/6/2018 1:12:09 PM	39989
Surr: 4-Terphenyl-d14	63.5	0	15-149		%Rec	1	9/6/2018 1:12:09 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	8.3	0.17	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Ethylbenzene	45	0.22	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2,4-Trimethylbenzene	4.2	0.25	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Naphthalene	99	0.29	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1-Methylnaphthalene	200	3.4	40		µg/L	10	8/24/2018 3:34:08 AM	W5366
2-Methylnaphthalene	89	0.24	4.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Acetone	ND	0.79	10		µg/L	1	8/24/2018 4:03:21 AM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 4:03:21 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 4:03:21 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
cis-1,2-DCE	0.76	0.38	1.0	J	µg/L	1	8/24/2018 4:03:21 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1-Dichloroethane	0.91	0.40	1.0	J	µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1-Dichloroethene	0.46	0.12	1.0	J	µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 4:03:21 AM	W5366
Isopropylbenzene	22	0.22	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
4-Isopropyltoluene	1.0	0.24	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 4:03:21 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
n-Butylbenzene	7.8	0.25	3.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
n-Propylbenzene	28	0.24	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
sec-Butylbenzene	13	0.20	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
tert-Butylbenzene	0.39	0.22	1.0	J	µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Vinyl chloride	1.4	0.11	1.0		µg/L	1	8/24/2018 4:03:21 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 4:03:21 AM	W5366
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/24/2018 4:03:21 AM	W5366
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	8/24/2018 4:03:21 AM	W5366
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	8/24/2018 4:03:21 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-39
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018 4:35:00 PM
Lab ID: 1808E67-004
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Surr: Toluene-d8	106	0	70-130		%Rec	1	8/24/2018 4:03:21 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.91	0.0097	0.050		mg/L	1	8/24/2018 4:03:21 AM	G5366
Surr: BFB	111	0	70-130		%Rec	1	8/24/2018 4:03:21 AM	G5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 1:22:28 AM	39971
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 1:22:28 AM	39971
Surr: DNOP	132	0	76.7-135		%Rec	1	8/28/2018 1:22:28 AM	39971
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.77	0.15	0.50		mg/L	5	8/31/2018 4:10:55 PM	R53881
Chloride	380	0.59	10		mg/L	20	8/23/2018 4:00:17 PM	R53678
Bromide	1.2	0.13	0.50		mg/L	5	8/23/2018 3:47:26 PM	R53678
Phosphorus, Orthophosphate (As P)	1.6	0.46	2.5	JH	mg/L	5	8/23/2018 3:47:26 PM	R53678
Sulfate	310	4.1	10		mg/L	20	8/23/2018 4:00:17 PM	R53678
Nitrate+Nitrite as N	1.9	0.27	1.0		mg/L	5	8/31/2018 3:19:27 PM	R53881
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.044	0.00099	0.0020		mg/L	1	9/11/2018 5:10:53 PM	C54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 5:10:53 PM	C54078
Calcium	190	0.39	5.0		mg/L	5	9/11/2018 5:13:00 PM	C54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 5:10:53 PM	C54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 5:10:53 PM	C54078
Iron	0.071	0.016	0.020		mg/L	1	9/11/2018 5:10:53 PM	C54078
Magnesium	35	0.25	1.0		mg/L	1	9/11/2018 5:10:53 PM	C54078
Manganese	2.2	0.0020	0.010	*	mg/L	5	9/11/2018 5:13:00 PM	C54078
Potassium	0.72	0.11	1.0	J	mg/L	1	9/11/2018 5:10:53 PM	C54078
Silver	0.0040	0.0018	0.0050	J	mg/L	1	9/11/2018 5:10:53 PM	C54078
Sodium	360	0.82	5.0		mg/L	5	9/11/2018 5:13:00 PM	C54078
Zinc	0.0095	0.0021	0.010	J	mg/L	1	9/11/2018 5:10:53 PM	C54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.19	0.0010	0.0020		mg/L	1	8/31/2018 2:38:37 PM	40015
Cadmium	ND	0.00058	0.0020		mg/L	1	8/31/2018 2:38:37 PM	40015
Chromium	ND	0.0018	0.0060		mg/L	1	9/4/2018 8:20:20 PM	40015
Copper	0.0046	0.0041	0.0060	J	mg/L	1	8/31/2018 2:38:37 PM	40015
Iron	3.0	0.051	0.10	*	mg/L	5	9/4/2018 8:22:19 PM	40015
Manganese	2.8	0.0055	0.010	*	mg/L	5	9/4/2018 8:22:19 PM	40015
Silver	0.0052	0.0012	0.0050		mg/L	1	8/31/2018 2:38:37 PM	40015
Zinc	0.0096	0.0033	0.010	J	mg/L	1	8/31/2018 2:38:37 PM	40015
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	8/27/2018 10:28:01 AM	B53710
Lead	ND	0.00087	0.0025		mg/L	5	8/28/2018 10:57:06 AM	B53766
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 10:28:01 AM	B53710
Uranium	0.027	0.00048	0.0025		mg/L	5	8/28/2018 10:57:06 AM	B53766

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0031	0.00041	0.0010		mg/L	1	8/29/2018 3:35:55 PM	40015
Lead	0.0027	0.00023	0.00050		mg/L	1	8/29/2018 3:35:55 PM	40015
Selenium	ND	0.00098	0.0010		mg/L	1	8/29/2018 3:35:55 PM	40015
Uranium	0.028	0.00034	0.0025		mg/L	5	8/30/2018 11:18:38 AM	40015
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000053	0.000038	0.00020	J	mg/L	1	9/8/2018 5:50:29 PM	40221
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Aniline	ND	6.2	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzoic acid	ND	6.3	20		µg/L	1	9/6/2018 12:42:48 PM	39989
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 12:42:48 PM	39989
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 12:42:48 PM	39989
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 12:42:48 PM	39989
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 12:42:48 PM	39989
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 12:42:48 PM	39989
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 12:42:48 PM	39989
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 12:42:48 PM	39989
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 12:42:48 PM	39989
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Phenol	ND	6.0	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 12:42:48 PM	39989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 12:42:48 PM	39989
Surr: 2-Fluorophenol	31.6	0	15-74.1		%Rec	1	9/6/2018 12:42:48 PM	39989
Surr: Phenol-d5	30.6	0	15-59.8		%Rec	1	9/6/2018 12:42:48 PM	39989
Surr: 2,4,6-Tribromophenol	57.4	0	22.1-112		%Rec	1	9/6/2018 12:42:48 PM	39989
Surr: Nitrobenzene-d5	44.7	0	33.2-94		%Rec	1	9/6/2018 12:42:48 PM	39989
Surr: 2-Fluorobiphenyl	49.7	0	34-90.9		%Rec	1	9/6/2018 12:42:48 PM	39989
Surr: 4-Terphenyl-d14	65.5	0	15-149		%Rec	1	9/6/2018 12:42:48 PM	39989
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Acetone	ND	0.79	10		µg/L	1	8/24/2018 3:05:07 AM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 3:05:07 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 3:05:07 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1-Dichloroethane	0.50	0.40	1.0	J	µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 3:05:07 AM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 3:05:07 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/24/2018 3:05:07 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 3:05:07 AM	W5366
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	8/24/2018 3:05:07 AM	W5366
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	8/24/2018 3:05:07 AM	W5366
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	8/24/2018 3:05:07 AM	W5366
Surr: Toluene-d8	99.2	0	70-130		%Rec	1	8/24/2018 3:05:07 AM	W5366
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP03
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/21/2018
Lab ID: 1808E67-005
Matrix: AQUEOUS
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.020	0.0097	0.050	J	mg/L	1	8/24/2018 3:05:07 AM	G53662
Surr: BFB	97.1	0	70-130		%Rec	1	8/24/2018 3:05:07 AM	G53662

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808E67-006
Matrix: TRIP BLANK
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Toluene	ND	0.17	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Naphthalene	ND	0.29	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Acetone	ND	0.79	10		µg/L	1	8/24/2018 1:08:34 AM	W5366
Bromobenzene	ND	0.32	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Bromoform	ND	0.32	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Bromomethane	ND	0.26	3.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
2-Butanone	ND	1.3	10		µg/L	1	8/24/2018 1:08:34 AM	W5366
Carbon disulfide	ND	0.39	10		µg/L	1	8/24/2018 1:08:34 AM	W5366
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Chloroethane	ND	0.16	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Chloroform	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Chloromethane	ND	0.29	3.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Dibromomethane	ND	0.32	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808E67-006
Matrix: TRIP BLANK
Received Date: 8/23/2018 10:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
2-Hexanone	ND	0.91	10		µg/L	1	8/24/2018 1:08:34 AM	W5366
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/24/2018 1:08:34 AM	W5366
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Styrene	ND	0.25	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/24/2018 1:08:34 AM	W5366
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/24/2018 1:08:34 AM	W5366
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/24/2018 1:08:34 AM	W5366
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	8/24/2018 1:08:34 AM	W5366
Surr: Dibromofluoromethane	99.6	0	70-130		%Rec	1	8/24/2018 1:08:34 AM	W5366
Surr: Toluene-d8	103	0	70-130		%Rec	1	8/24/2018 1:08:34 AM	W5366

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	111	50	150			
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Calcium	0.59	1.0	0.5000	0	119	50	150			J
Chromium	0.0054	0.0060	0.006000	0	89.7	50	150			J
Copper	0.0058	0.0060	0.006000	0	97.3	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Potassium	0.47	1.0	0.5000	0	94.9	50	150			J
Silver	0.0051	0.0050	0.005000	0	102	50	150			
Sodium	0.54	1.0	0.5000	0	107	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	105	85	115			
Calcium	49	1.0	50.00	0	97.3	85	115			
Chromium	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.48	0.020	0.5000	0	97.0	85	115			
Magnesium	48	1.0	50.00	0	97.0	85	115			
Manganese	0.48	0.0020	0.5000	0	96.4	85	115			
Potassium	49	1.0	50.00	0	97.9	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID **1808E67-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB03**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Calcium	51	1.0	50.00	0	101	70	130			
Chromium	0.47	0.0060	0.5000	0	93.2	70	130			
Copper	0.49	0.0060	0.5000	0	97.3	70	130			
Iron	0.51	0.020	0.5000	0	101	70	130			
Magnesium	49	1.0	50.00	0	97.8	70	130			
Manganese	0.48	0.0020	0.5000	0	95.8	70	130			
Potassium	49	1.0	50.00	0	98.5	70	130			
Silver	0.10	0.0050	0.1000	0	101	70	130			
Sodium	54	1.0	50.00	0	109	70	130			
Zinc	0.52	0.010	0.5000	0.007740	102	70	130			

Sample ID **1808E67-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB03**	Batch ID: **C54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786794** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	70	130	0.173	20	
Cadmium	0.52	0.0020	0.5000	0	105	70	130	0.197	20	
Calcium	48	1.0	50.00	0	97.0	70	130	4.10	20	
Chromium	0.47	0.0060	0.5000	0	93.5	70	130	0.321	20	
Copper	0.49	0.0060	0.5000	0	98.3	70	130	1.08	20	
Iron	0.49	0.020	0.5000	0	97.3	70	130	4.00	20	
Magnesium	47	1.0	50.00	0	94.0	70	130	3.91	20	
Manganese	0.48	0.0020	0.5000	0	96.5	70	130	0.738	20	
Potassium	48	1.0	50.00	0	95.0	70	130	3.55	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808E67-001EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**FB03**	Batch ID:	**C54078**		RunNo:	**54078**				
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786794**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	70	130	0.119	20	
Sodium	52	1.0	50.00	0	105	70	130	3.34	20	
Zinc	0.52	0.010	0.5000	0.007740	102	70	130	0.129	20	

Sample ID	**1808E67-002EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**EB03**	Batch ID:	**C54078**		RunNo:	**54078**				
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786796**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	70	130			
Cadmium	0.51	0.0020	0.5000	0	102	70	130			
Calcium	47	1.0	50.00	0	94.5	70	130			
Chromium	0.45	0.0060	0.5000	0	90.5	70	130			
Copper	0.48	0.0060	0.5000	0	95.7	70	130			
Iron	0.49	0.020	0.5000	0	97.1	70	130			
Magnesium	46	1.0	50.00	0	91.9	70	130			
Manganese	0.47	0.0020	0.5000	0	94.0	70	130			
Potassium	46	1.0	50.00	0	92.8	70	130			
Silver	0.098	0.0050	0.1000	0	97.9	70	130			
Sodium	53	1.0	50.00	0.7236	104	70	130			
Zinc	0.52	0.010	0.5000	0.01836	100	70	130			

Sample ID	**1808E67-002EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**EB03**	Batch ID:	**C54078**		RunNo:	**54078**				
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786797**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.8	70	130	2.08	20	
Cadmium	0.52	0.0020	0.5000	0	104	70	130	2.01	20	
Calcium	48	1.0	50.00	0	96.3	70	130	1.96	20	
Chromium	0.47	0.0060	0.5000	0	93.2	70	130	2.93	20	
Copper	0.48	0.0060	0.5000	0	96.5	70	130	0.891	20	
Iron	0.49	0.020	0.5000	0	98.6	70	130	1.54	20	
Magnesium	47	1.0	50.00	0	93.6	70	130	1.80	20	
Manganese	0.47	0.0020	0.5000	0	94.4	70	130	0.429	20	
Potassium	47	1.0	50.00	0	94.4	70	130	1.71	20	
Silver	0.10	0.0050	0.1000	0	101	70	130	3.45	20	
Sodium	53	1.0	50.00	0.7236	104	70	130	0.0152	20	
Zinc	0.53	0.010	0.5000	0.01836	102	70	130	1.72	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808E67-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB03**	Batch ID:	**40015**		RunNo:	**53874**				
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777803**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	70	130			
Cadmium	0.50	0.0020	0.5000	0	101	70	130			
Copper	0.50	0.0060	0.5000	0	101	70	130			
Iron	0.53	0.020	0.5000	0	106	70	130			
Manganese	0.51	0.0020	0.5000	0	102	70	130			
Silver	0.097	0.0050	0.1000	0	97.0	70	130			
Zinc	0.48	0.010	0.5000	0	95.6	70	130			

Sample ID	**1808E67-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB03**	Batch ID:	**40015**		RunNo:	**53874**				
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777804**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.4	70	130	1.97	20	
Cadmium	0.50	0.0020	0.5000	0	99.3	70	130	1.28	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	0.0794	20	
Iron	0.53	0.020	0.5000	0	106	70	130	0.758	20	
Manganese	0.51	0.0020	0.5000	0	101	70	130	0.711	20	
Silver	0.096	0.0050	0.1000	0	96.2	70	130	0.869	20	
Zinc	0.47	0.010	0.5000	0	94.0	70	130	1.68	20	

Sample ID	**MB-40015**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40015**		RunNo:	**53874**				
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777874**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40015**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40015**		RunNo:	**53874**				
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777875**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-40015**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40015**		RunNo:	**53874**					
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777875**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.0019	0.0020	0.002000	0	96.5	50	150			J	
Cadmium	0.0021	0.0020	0.002000	0	103	50	150				
Chromium	0.0055	0.0060	0.006000	0	91.8	50	150			J	
Copper	0.0057	0.0060	0.006000	0	94.7	50	150			J	
Iron	0.019	0.020	0.02000	0	96.7	50	150			J	
Manganese	0.0021	0.0020	0.002000	0	104	50	150				
Silver	0.0048	0.0050	0.005000	0	95.8	50	150			J	
Zinc	0.0071	0.010	0.005000	0	142	50	150			J	

Sample ID	**LCS-40015**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40015**		RunNo:	**53874**					
Prep Date:	**8/27/2018**	Analysis Date:	**8/31/2018**		SeqNo:	**1777876**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.49	0.0020	0.5000	0	98.7	85	115				
Cadmium	0.51	0.0020	0.5000	0	101	85	115				
Chromium	0.50	0.0060	0.5000	0	99.9	85	115				
Copper	0.49	0.0060	0.5000	0	97.9	85	115				
Iron	0.50	0.020	0.5000	0	100	85	115				
Manganese	0.49	0.0020	0.5000	0	97.6	85	115				
Silver	0.098	0.0050	0.1000	0	98.0	85	115				
Zinc	0.49	0.010	0.5000	0	98.8	85	115				

Sample ID	**1808E67-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**FB03**	Batch ID:	**40015**		RunNo:	**53893**					
Prep Date:	**8/27/2018**	Analysis Date:	**9/4/2018**		SeqNo:	**1779165**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chromium	0.48	0.0060	0.5000	0	96.6	70	130				

Sample ID	**1808E67-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**FB03**	Batch ID:	**40015**		RunNo:	**53893**					
Prep Date:	**8/27/2018**	Analysis Date:	**9/4/2018**		SeqNo:	**1779166**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chromium	0.48	0.0060	0.5000	0	95.3	70	130	1.27	20		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771843** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.2	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.1	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.4	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.6	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771845** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.012	0.00050	0.01250	0	99.2	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.3	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53766**	RunNo: **53766**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773831** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53766**	RunNo: **53766**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B53766**	RunNo:	**53766**					
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773833**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Selenium	0.00092	0.0010	0.001000	0	91.9	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.6	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B53766**	RunNo:	**53766**					
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773836**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.012	0.00050	0.01250	0	99.8	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40015**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40015**	RunNo:	**53797**					
Prep Date:	**8/27/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775292**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40015**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40015**	RunNo:	**53797**					
Prep Date:	**8/27/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775293**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.7	50	150			J
Selenium	0.00090	0.0010	0.001000	0	90.3	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	87.9	50	150			J

Sample ID	**MSLCS-40015**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40015**	RunNo:	**53797**					
Prep Date:	**8/27/2018**	Analysis Date:	**8/29/2018**	SeqNo:	**1775294**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.024	0.0010	0.02500	0	95.6	85	115			
Uranium	0.011	0.00050	0.01250	0	89.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40221**	SampType: **MBLK**		TestCode: **EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID: **40221**		RunNo: **54005**						
Prep Date:	**9/7/2018**	Analysis Date: **9/8/2018**		SeqNo: **1783935**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000067	0.00020								J

Sample ID	**LCS-40221**	SampType: **LCS**		TestCode: **EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID: **40221**		RunNo: **54005**						
Prep Date:	**9/7/2018**	Analysis Date: **9/8/2018**		SeqNo: **1783936**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0044	0.00020	0.005000	0	88.6	80	120			

Sample ID	**1808E67-001FMS**	SampType: **MS**		TestCode: **EPA Method 245.1: Mercury**						
Client ID:	**FB03**	Batch ID: **40221**		RunNo: **54005**						
Prep Date:	**9/7/2018**	Analysis Date: **9/8/2018**		SeqNo: **1783939**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	0	89.4	75	125			

Sample ID	**1808E67-001FMSD**	SampType: **MSD**		TestCode: **EPA Method 245.1: Mercury**						
Client ID:	**FB03**	Batch ID: **40221**		RunNo: **54005**						
Prep Date:	**9/7/2018**	Analysis Date: **9/8/2018**		SeqNo: **1783940**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	91.4	75	125	2.22	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53678**	RunNo: **53678**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770244** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.25	0.50								J
Sulfate	0.21	0.50								J

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53678**	RunNo: **53678**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.59	0.10	0.5000	0	118	90	110			S
Chloride	4.7	0.50	5.000	0	93.8	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.4	90	110			
Bromide	2.4	0.10	2.500	0	95.5	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.2	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.0	90	110			
Sulfate	9.3	0.50	10.00	0	92.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53881**	RunNo: **53881**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.29	0.50								J
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53881**	RunNo: **53881**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778293** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	107	90	110			
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-39971**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **39971**	RunNo: **53723**
Prep Date: **8/24/2018**	Analysis Date: **8/27/2018**	SeqNo: **1772395** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		122	76.7	135			

Sample ID **LCS-39971**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **39971**	RunNo: **53723**
Prep Date: **8/24/2018**	Analysis Date: **8/27/2018**	SeqNo: **1772396** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.55		0.5000		109	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770161** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770161** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770162** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.0	70	130			
Toluene	18	1.0	20.00	0	90.4	70	130			
Chlorobenzene	18	1.0	20.00	0	88.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770162** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53711**	RunNo: **53711**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771872** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53711**	RunNo: **53711**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771873** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-39989**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782616** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.6	55.1	104			
4-Chloro-3-methylphenol	180	10	200.0	0	90.2	57	115			
2-Chlorophenol	170	10	200.0	0	85.9	43.4	112			
1,4-Dichlorobenzene	76	10	100.0	0	76.1	38	95.2			
2,4-Dinitrotoluene	69	10	100.0	0	69.4	55.1	96.7			
N-Nitrosodi-n-propylamine	91	10	100.0	0	90.9	55	112			
4-Nitrophenol	140	10	200.0	0	69.6	16.6	93			
Pentachlorophenol	160	20	200.0	0	79.4	43.2	104			
Phenol	130	10	200.0	0	64.7	21.3	85.7			
Pyrene	89	10	100.0	0	89.1	64.9	105			
1,2,4-Trichlorobenzene	87	10	100.0	0	87.3	42.6	107			
Surr: 2-Fluorophenol	140		200.0		70.0	15	74.1			
Surr: Phenol-d5	140		200.0		68.4	15	59.8			S
Surr: 2,4,6-Tribromophenol	160		200.0		80.8	22.1	112			
Surr: Nitrobenzene-d5	85		100.0		85.4	33.2	94			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	34	90.9			
Surr: 4-Terphenyl-d14	89		100.0		89.2	15	149			

Sample ID **mb-39989**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **39989**	RunNo: **53982**
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782619** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39989**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **39989**	RunNo: **53982**	
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782619**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-39989**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **39989**	RunNo: **53982**	
Prep Date: **8/27/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782619**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		76.4	15	74.1			S
Surr: Phenol-d5	150		200.0		75.3	15	59.8			S
Surr: 2,4,6-Tribromophenol	180		200.0		88.9	22.1	112			
Surr: Nitrobenzene-d5	90		100.0		90.1	33.2	94			
Surr: 2-Fluorobiphenyl	85		100.0		85.3	34	90.9			
Surr: 4-Terphenyl-d14	89		100.0		89.0	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808E67**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770201** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.016	0.050								J
Surr: BFB	10		10.00		100	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53662**	RunNo: **53662**
Prep Date:	Analysis Date: **8/23/2018**	SeqNo: **1770202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	102	70	130			
Surr: BFB	9.7		10.00		97.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808E67 RcptNo: 1

Received By: **Erin Melendrez** 8/23/2018 10:40:00 AM

Completed By: **Ashley Gallegos** 8/23/2018 11:43:36 AM

Reviewed By: 08/23/18 Labeled by: ENM 8/23/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 15 (<2 or >12 unless noted)
Adjusted? NO
Checked by: ENM 8/23/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			
2	0.8	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No ENH 8/23/18

Sample Temperature: 00 IR-1: 3.8-1.0(C)=2.8 / 00 IR-2: 1.8-1.0(C)=0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808E67	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/21/18	1430	H_2O	FB03	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	0700		Courier ENH 8/23/18	8/23/18	1040
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No EJH 8/23/18

Sample Temperature: cooler 1: 3.8-1.0(c)=2.8 cooler 2: 1.8-1.0(c)=0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808E607	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/21/18	1450	H_2O	EB03	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	0700		Courier EJH 8/23/18	8/23/18	1040
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne** ENM 8/23/18
On Ice: X Yes ☐ No
Sample Temperature: Cooler 1: 3.8-1.0(cf)=2.8 Cooler 2: 1.8-1.0(cf)=0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
						Analysis Request																
8/22/18	1525	H_2O	MKTF-38	40ml VOA-5	HCl	1808E67 -003			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date: 8/22/18 Time: 0700 Relinquished by:
Date: Time: Relinquished by:

Received by: Courier EJH 8/23/18 Date 8/23/18 Time 1040
Received by: Date Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne** ENM 8/23/18

On Ice: **X** Yes ☐ No

Sample Temperature: COOLER 1: 3.8-1.0(CF) = 2.8 COOLER 2: 1.8-1.0(CF) = 0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808E607	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/21/18	1635	H_2O	MKTF-39	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/22/18	0700		Courier ENM 8/23/18	8/23/18	1040
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne** ENM 8/23/18

On Ice: **X** Yes ☐ No

Sample Temperature: Cooler 1: 3.8-1.0(CF)=2.8 Cooler 2: 1.8-1.0(CF)= 0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	—	H_2O	DUP03	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/22/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl											X						

Date: 8/22/18 Time: 0700 Relinquished by: _____ Received by: courier ENM 8/23/18 Date: 8/23/18 Time: 1040

Date: Time: Relinquished by: Received by: Date: Time:

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808F16

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/24/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 11:04:14 AM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 11:04:14 AM	40016
Surr: DNOP	127	0	76.7-135		%Rec	1	8/28/2018 11:04:14 AM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 1:22:08 PM	R53713
Chloride	0.14	0.029	0.50	J	mg/L	1	8/24/2018 1:22:08 PM	R53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 1:22:08 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	8/24/2018 1:22:08 PM	R53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 1:22:08 PM	R53713
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/10/2018 3:15:22 PM	R54057
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 8:33:57 PM	E54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:33:57 PM	E54078
Calcium	ND	0.078	1.0		mg/L	1	9/11/2018 8:33:57 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:33:57 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:33:57 PM	E54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 8:33:57 PM	E54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 8:33:57 PM	E54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 8:33:57 PM	E54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 8:33:57 PM	E54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 8:33:57 PM	E54078
Sodium	ND	0.16	1.0		mg/L	1	9/11/2018 8:33:57 PM	E54078
Zinc	0.014	0.0021	0.010		mg/L	1	9/11/2018 8:33:57 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/10/2018 7:59:12 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 7:59:12 PM	40189
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 7:59:12 PM	40189
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 7:59:12 PM	40189
Iron	ND	0.010	0.020		mg/L	1	9/10/2018 7:59:12 PM	40189
Manganese	ND	0.0011	0.0020		mg/L	1	9/10/2018 7:59:12 PM	40189
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 7:59:12 PM	40189
Zinc	ND	0.0033	0.010		mg/L	1	9/10/2018 7:59:12 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/27/2018 9:42:34 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 9:42:34 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:42:34 AM	B53710
Uranium	ND	0.000096	0.00050		mg/L	1	8/27/2018 9:42:34 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/8/2018 11:58:10 AM	40189
Lead	ND	0.00023	0.00050		mg/L	1	9/8/2018 11:58:10 AM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 11:58:10 AM	40189
Uranium	ND	0.000068	0.00050		mg/L	1	9/8/2018 11:58:10 AM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 1:01:12 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Benzoic acid	7.9	6.3	20	J	µg/L	1	9/6/2018 4:38:02 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 4:38:02 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 4:38:02 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 4:38:02 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 4:38:02 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 4:38:02 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 4:38:02 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 4:38:02 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 4:38:02 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 4:38:02 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 4:38:02 PM	40042
Surr: 2-Fluorophenol	44.9	0	15-74.1		%Rec	1	9/6/2018 4:38:02 PM	40042
Surr: Phenol-d5	38.0	0	15-59.8		%Rec	1	9/6/2018 4:38:02 PM	40042
Surr: 2,4,6-Tribromophenol	71.4	0	22.1-112		%Rec	1	9/6/2018 4:38:02 PM	40042
Surr: Nitrobenzene-d5	66.8	0	33.2-94		%Rec	1	9/6/2018 4:38:02 PM	40042
Surr: 2-Fluorobiphenyl	64.5	0	34-90.9		%Rec	1	9/6/2018 4:38:02 PM	40042
Surr: 4-Terphenyl-d14	84.6	0	15-149		%Rec	1	9/6/2018 4:38:02 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Toluene	0.26	0.17	1.0	J	µg/L	1	8/27/2018 6:14:31 PM	R53736
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Naphthalene	ND	0.29	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Acetone	13	0.79	10	E	µg/L	1	8/27/2018 6:14:31 PM	R53736
Bromobenzene	ND	0.32	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Bromoform	ND	0.32	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Bromomethane	ND	0.26	3.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
2-Butanone	ND	1.3	10		µg/L	1	8/27/2018 6:14:31 PM	R53736
Carbon disulfide	ND	0.39	10		µg/L	1	8/27/2018 6:14:31 PM	R53736
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Chloroethane	ND	0.16	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Chloroform	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Chloromethane	ND	0.29	3.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Dibromomethane	ND	0.32	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
2-Hexanone	ND	0.91	10		µg/L	1	8/27/2018 6:14:31 PM	R53736
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/27/2018 6:14:31 PM	R53736
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Styrene	ND	0.25	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/27/2018 6:14:31 PM	R53736
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/27/2018 6:14:31 PM	R53736
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	8/27/2018 6:14:31 PM	R53736
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	8/27/2018 6:14:31 PM	R53736
Surr: Dibromofluoromethane	116	0	70-130		%Rec	1	8/27/2018 6:14:31 PM	R53736
Surr: Toluene-d8	94.8	0	70-130		%Rec	1	8/27/2018 6:14:31 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 10:55:00 AM
Lab ID: 1808F16-001
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	8/27/2018 6:14:31 PM	G53736
Surr: BFB	102	0	70-130		%Rec	1	8/27/2018 6:14:31 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 11:26:15 AM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 11:26:15 AM	40016
Surr: DNOP	135	0	76.7-135	S	%Rec	1	8/28/2018 11:26:15 AM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 1:46:58 PM	R53713
Chloride	0.20	0.029	0.50	J	mg/L	1	8/24/2018 1:46:58 PM	R53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 1:46:58 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	8/24/2018 1:46:58 PM	R53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 1:46:58 PM	R53713
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/10/2018 3:28:14 PM	R54057
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/11/2018 8:40:16 PM	E54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:40:16 PM	E54078
Calcium	0.12	0.078	1.0	J	mg/L	1	9/11/2018 8:40:16 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:40:16 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:40:16 PM	E54078
Iron	ND	0.016	0.020		mg/L	1	9/11/2018 8:40:16 PM	E54078
Magnesium	ND	0.25	1.0		mg/L	1	9/11/2018 8:40:16 PM	E54078
Manganese	ND	0.00039	0.0020		mg/L	1	9/11/2018 8:40:16 PM	E54078
Potassium	ND	0.11	1.0		mg/L	1	9/11/2018 8:40:16 PM	E54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 8:40:16 PM	E54078
Sodium	ND	0.16	1.0		mg/L	1	9/11/2018 8:40:16 PM	E54078
Zinc	0.022	0.0021	0.010		mg/L	1	9/11/2018 8:40:16 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/10/2018 8:05:21 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 8:05:21 PM	40189
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 8:05:21 PM	40189
Copper	0.0046	0.0041	0.0060	J	mg/L	1	9/10/2018 8:05:21 PM	40189
Iron	ND	0.010	0.020		mg/L	1	9/10/2018 8:05:21 PM	40189
Manganese	ND	0.0011	0.0020		mg/L	1	9/10/2018 8:05:21 PM	40189
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 8:05:21 PM	40189
Zinc	ND	0.0033	0.010		mg/L	1	9/10/2018 8:05:21 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/27/2018 9:44:56 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 9:44:56 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:44:56 AM	B53710
Uranium	ND	0.000096	0.00050		mg/L	1	8/27/2018 9:44:56 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/8/2018 12:05:13 PM	40189
Lead	ND	0.00023	0.00050		mg/L	1	9/8/2018 12:05:13 PM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 12:05:13 PM	40189
Uranium	ND	0.000068	0.00050		mg/L	1	9/8/2018 12:05:13 PM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 1:08:33 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Benzoic acid	7.4	6.3	20	J	µg/L	1	9/6/2018 5:07:26 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 5:07:26 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 5:07:26 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 5:07:26 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 5:07:26 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 5:07:26 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 5:07:26 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 5:07:26 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 5:07:26 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 5:07:26 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 5:07:26 PM	40042
Surr: 2-Fluorophenol	33.2	0	15-74.1		%Rec	1	9/6/2018 5:07:26 PM	40042
Surr: Phenol-d5	28.7	0	15-59.8		%Rec	1	9/6/2018 5:07:26 PM	40042
Surr: 2,4,6-Tribromophenol	59.2	0	22.1-112		%Rec	1	9/6/2018 5:07:26 PM	40042
Surr: Nitrobenzene-d5	48.1	0	33.2-94		%Rec	1	9/6/2018 5:07:26 PM	40042
Surr: 2-Fluorobiphenyl	52.0	0	34-90.9		%Rec	1	9/6/2018 5:07:26 PM	40042
Surr: 4-Terphenyl-d14	69.3	0	15-149		%Rec	1	9/6/2018 5:07:26 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Toluene	0.23	0.17	1.0	J	µg/L	1	8/27/2018 6:43:50 PM	R53736
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Naphthalene	ND	0.29	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Acetone	13	0.79	10	E	µg/L	1	8/27/2018 6:43:50 PM	R53736
Bromobenzene	ND	0.32	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Bromoform	ND	0.32	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Bromomethane	ND	0.26	3.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
2-Butanone	ND	1.3	10		µg/L	1	8/27/2018 6:43:50 PM	R53736
Carbon disulfide	ND	0.39	10		µg/L	1	8/27/2018 6:43:50 PM	R53736
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Chloroethane	ND	0.16	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Chloroform	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Chloromethane	ND	0.29	3.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Dibromomethane	ND	0.32	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
2-Hexanone	ND	0.91	10		µg/L	1	8/27/2018 6:43:50 PM	R53736
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/27/2018 6:43:50 PM	R53736
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Styrene	ND	0.25	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/27/2018 6:43:50 PM	R53736
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/27/2018 6:43:50 PM	R53736
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	8/27/2018 6:43:50 PM	R53736
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	8/27/2018 6:43:50 PM	R53736
Surr: Dibromofluoromethane	119	0	70-130		%Rec	1	8/27/2018 6:43:50 PM	R53736
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	8/27/2018 6:43:50 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 11:15:00 AM
Lab ID: 1808F16-002
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	8/27/2018 6:43:50 PM	G53736
Surr: BFB	103	0	70-130		%Rec	1	8/27/2018 6:43:50 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	5.9	0.63	1.0		mg/L	1	8/28/2018 11:48:22 AM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 11:48:22 AM	40016
Surr: DNOP	129	0	76.7-135		%Rec	1	8/28/2018 11:48:22 AM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.39	0.15	0.50	J	mg/L	5	8/24/2018 12:07:39 PM	R53713
Chloride	88	0.59	10		mg/L	20	8/24/2018 12:20:04 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 12:07:39 PM	R53713
Bromide	0.54	0.13	0.50		mg/L	5	8/24/2018 12:07:39 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 12:07:39 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 12:07:39 PM	R53713
Sulfate	ND	1.0	2.5		mg/L	5	8/24/2018 12:07:39 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.9	0.0099	0.020	*	mg/L	10	9/12/2018 2:27:03 PM	A54107
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:42:39 PM	E54078
Calcium	87	0.078	1.0		mg/L	1	9/11/2018 8:42:39 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:42:39 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:42:39 PM	E54078
Iron	5.8	0.16	0.20	*	mg/L	10	9/12/2018 2:27:03 PM	A54107
Magnesium	16	0.25	1.0		mg/L	1	9/11/2018 8:42:39 PM	E54078
Manganese	1.2	0.0039	0.020	*	mg/L	10	9/12/2018 2:27:03 PM	A54107
Potassium	0.56	0.11	1.0	J	mg/L	1	9/11/2018 8:42:39 PM	E54078
Silver	0.0022	0.0018	0.0050	J	mg/L	1	9/11/2018 8:42:39 PM	E54078
Sodium	310	1.6	10		mg/L	10	9/12/2018 2:27:03 PM	A54107
Zinc	0.011	0.0021	0.010		mg/L	1	9/11/2018 8:42:39 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	3.8	0.010	0.020	*	mg/L	10	9/12/2018 3:21:27 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 8:19:43 PM	40189
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 8:19:43 PM	40189
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 8:19:43 PM	40189
Iron	5.9	0.10	0.20	*	mg/L	10	9/12/2018 3:21:27 PM	40189
Manganese	1.6	0.011	0.020	*	mg/L	10	9/12/2018 3:21:27 PM	40189
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/10/2018 8:19:43 PM	40189
Zinc	0.0064	0.0033	0.010	J	mg/L	1	9/10/2018 8:19:43 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	8/27/2018 9:47:21 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 9:47:21 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:47:21 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.00020	0.000096	0.00050	J	mg/L	1	8/27/2018 9:47:21 AM	B53710
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.013	0.00041	0.0010	*	mg/L	1	9/8/2018 12:07:34 PM	40189
Lead	0.00078	0.00023	0.00050		mg/L	1	9/8/2018 12:07:34 PM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 12:07:34 PM	40189
Uranium	0.00037	0.000068	0.00050	J	mg/L	1	9/8/2018 12:07:34 PM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	9/11/2018 1:10:51 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzoic acid	39	6.3	20		µg/L	1	9/6/2018 5:36:41 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4-Dimethylphenol	17	5.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 5:36:41 PM	40042
1-Methylnaphthalene	77	7.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Methylnaphthalene	91	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 5:36:41 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 5:36:41 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Naphthalene	210	5.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 5:36:41 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 5:36:41 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Phenol	25	6.0	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 5:36:41 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 5:36:41 PM	40042
Surr: 2-Fluorophenol	37.9	0	15-74.1		%Rec	1	9/6/2018 5:36:41 PM	40042
Surr: Phenol-d5	44.2	0	15-59.8		%Rec	1	9/6/2018 5:36:41 PM	40042
Surr: 2,4,6-Tribromophenol	70.6	0	22.1-112		%Rec	1	9/6/2018 5:36:41 PM	40042
Surr: Nitrobenzene-d5	59.1	0	33.2-94		%Rec	1	9/6/2018 5:36:41 PM	40042
Surr: 2-Fluorobiphenyl	66.1	0	34-90.9		%Rec	1	9/6/2018 5:36:41 PM	40042
Surr: 4-Terphenyl-d14	79.0	0	15-149		%Rec	1	9/6/2018 5:36:41 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	9000	35	200		µg/L	200	8/27/2018 7:13:04 PM	R53736
Toluene	84	3.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Ethylbenzene	1100	4.5	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Methyl tert-butyl ether (MTBE)	48	6.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2,4-Trimethylbenzene	14	5.1	20	J	µg/L	20	8/27/2018 7:42:16 PM	R53736
1,3,5-Trimethylbenzene	36	4.6	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Naphthalene	330	5.8	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
1-Methylnaphthalene	92	6.7	80		µg/L	20	8/27/2018 7:42:16 PM	R53736
2-Methylnaphthalene	110	4.8	80		µg/L	20	8/27/2018 7:42:16 PM	R53736
Acetone	590	16	200	E	µg/L	20	8/27/2018 7:42:16 PM	R53736
Bromobenzene	ND	6.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Bromodichloromethane	ND	5.7	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Bromoform	ND	6.5	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Bromomethane	ND	5.1	60		µg/L	20	8/27/2018 7:42:16 PM	R53736
2-Butanone	ND	25	200		µg/L	20	8/27/2018 7:42:16 PM	R53736
Carbon disulfide	ND	7.7	200		µg/L	20	8/27/2018 7:42:16 PM	R53736
Carbon Tetrachloride	ND	2.7	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Chlorobenzene	ND	5.8	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Chloroethane	ND	3.3	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
Chloroform	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Chloromethane	ND	5.9	60		µg/L	20	8/27/2018 7:42:16 PM	R53736
2-Chlorotoluene	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
4-Chlorotoluene	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
cis-1,2-DCE	ND	7.5	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
Dibromochloromethane	ND	4.7	20		µg/L	20	8/27/2018 7:42:16 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	6.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Dichlorodifluoromethane	ND	20	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1-Dichloroethane	ND	8.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1-Dichloroethene	ND	2.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2-Dichloropropane	ND	3.1	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,3-Dichloropropane	ND	5.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
2,2-Dichloropropane	ND	3.7	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1-Dichloropropene	ND	3.2	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Hexachlorobutadiene	ND	16	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
2-Hexanone	ND	18	200		µg/L	20	8/27/2018 7:42:16 PM	R53736
Isopropylbenzene	54	4.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
4-Isopropyltoluene	ND	4.8	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	8/27/2018 7:42:16 PM	R53736
Methylene Chloride	ND	4.1	60		µg/L	20	8/27/2018 7:42:16 PM	R53736
n-Butylbenzene	22	5.0	60	J	µg/L	20	8/27/2018 7:42:16 PM	R53736
n-Propylbenzene	180	4.9	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
sec-Butylbenzene	7.2	4.0	20	J	µg/L	20	8/27/2018 7:42:16 PM	R53736
Styrene	ND	5.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
tert-Butylbenzene	ND	4.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
trans-1,2-DCE	ND	3.7	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Trichlorofluoromethane	ND	3.4	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
1,2,3-Trichloropropane	ND	11	40		µg/L	20	8/27/2018 7:42:16 PM	R53736
Vinyl chloride	ND	2.2	20		µg/L	20	8/27/2018 7:42:16 PM	R53736
Xylenes, Total	520	13	30		µg/L	20	8/27/2018 7:42:16 PM	R53736
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	20	8/27/2018 7:42:16 PM	R53736
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	20	8/27/2018 7:42:16 PM	R53736
Surr: Dibromofluoromethane	114	0	70-130		%Rec	20	8/27/2018 7:42:16 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-63
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 12:40:00 PM
Lab ID: 1808F16-003 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	96.1	0	70-130		%Rec	20	8/27/2018 7:42:16 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	35	0.19	1.0		mg/L	20	8/27/2018 7:42:16 PM	G53736
Surr: BFB	101	0	70-130		%Rec	20	8/27/2018 7:42:16 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	8/28/2018 12:10:16 PM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 12:10:16 PM	40016
Surr: DNOP	131	0	76.7-135		%Rec	1	8/28/2018 12:10:16 PM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	4.4	0.15	0.50	*	mg/L	5	8/24/2018 12:32:29 PM	R53713
Chloride	20	0.15	2.5		mg/L	5	8/24/2018 12:32:29 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 12:32:29 PM	R53713
Bromide	1.3	0.13	0.50		mg/L	5	8/24/2018 12:32:29 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 12:32:29 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 12:32:29 PM	R53713
Sulfate	4.3	1.0	2.5		mg/L	5	8/24/2018 12:32:29 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.33	0.00099	0.0020		mg/L	1	9/11/2018 8:44:38 PM	E54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:44:38 PM	E54078
Calcium	11	0.078	1.0		mg/L	1	9/11/2018 8:44:38 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:44:38 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:44:38 PM	E54078
Iron	0.17	0.016	0.020		mg/L	1	9/11/2018 8:44:38 PM	E54078
Magnesium	3.0	0.25	1.0		mg/L	1	9/11/2018 8:44:38 PM	E54078
Manganese	0.34	0.00039	0.0020	*	mg/L	1	9/11/2018 8:44:38 PM	E54078
Potassium	1.6	0.11	1.0		mg/L	1	9/11/2018 8:44:38 PM	E54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 8:44:38 PM	E54078
Sodium	470	1.6	10		mg/L	10	9/12/2018 2:29:02 PM	A54107
Zinc	0.011	0.0021	0.010		mg/L	1	9/11/2018 8:44:38 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.47	0.0010	0.0020		mg/L	1	9/10/2018 8:21:41 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 8:21:41 PM	40189
Chromium	0.0033	0.0018	0.0060	J	mg/L	1	9/10/2018 8:21:41 PM	40189
Copper	0.018	0.0041	0.0060		mg/L	1	9/10/2018 8:21:41 PM	40189
Iron	2.6	0.051	0.10	*	mg/L	5	9/12/2018 3:23:30 PM	40189
Manganese	0.46	0.0011	0.0020	*	mg/L	1	9/10/2018 8:21:41 PM	40189
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 8:21:41 PM	40189
Zinc	0.0089	0.0033	0.010	J	mg/L	1	9/10/2018 8:21:41 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0068	0.00042	0.0010		mg/L	1	8/27/2018 9:49:46 AM	B53710
Lead	0.00019	0.00017	0.00050	J	mg/L	1	8/27/2018 9:49:46 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:49:46 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.012	0.000096	0.00050		mg/L	1	8/28/2018 10:59:28 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0067	0.00041	0.0010		mg/L	1	9/8/2018 12:09:54 PM	40189
Lead	0.0022	0.00023	0.00050		mg/L	1	9/8/2018 12:09:54 PM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 12:09:54 PM	40189
Uranium	0.010	0.000068	0.00050		mg/L	1	9/8/2018 12:09:54 PM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	9/11/2018 1:17:46 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Benzoic acid	11	6.3	20	J	µg/L	1	9/6/2018 6:06:03 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4-Dimethylphenol	24	5.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 6:06:03 PM	40042
1-Methylnaphthalene	9.1	7.0	10	J	µg/L	1	9/6/2018 6:06:03 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2-Methylphenol	9.9	6.3	10	J	µg/L	1	9/6/2018 6:06:03 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 6:06:03 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Naphthalene	17	5.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 6:06:03 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 6:06:03 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 6:06:03 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 6:06:03 PM	40042
Surr: 2-Fluorophenol	24.9	0	15-74.1		%Rec	1	9/6/2018 6:06:03 PM	40042
Surr: Phenol-d5	43.9	0	15-59.8		%Rec	1	9/6/2018 6:06:03 PM	40042
Surr: 2,4,6-Tribromophenol	77.5	0	22.1-112		%Rec	1	9/6/2018 6:06:03 PM	40042
Surr: Nitrobenzene-d5	77.6	0	33.2-94		%Rec	1	9/6/2018 6:06:03 PM	40042
Surr: 2-Fluorobiphenyl	75.1	0	34-90.9		%Rec	1	9/6/2018 6:06:03 PM	40042
Surr: 4-Terphenyl-d14	84.5	0	15-149		%Rec	1	9/6/2018 6:06:03 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	180	0.87	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Toluene	550	8.4	50		µg/L	50	8/27/2018 9:09:49 PM	R53736
Ethylbenzene	400	1.1	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Methyl tert-butyl ether (MTBE)	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2,4-Trimethylbenzene	440	1.3	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,3,5-Trimethylbenzene	80	1.2	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Naphthalene	20	1.4	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
1-Methylnaphthalene	7.0	1.7	20	J	µg/L	5	8/27/2018 9:38:58 PM	R53736
2-Methylnaphthalene	6.4	1.2	20	J	µg/L	5	8/27/2018 9:38:58 PM	R53736
Acetone	46	3.9	50	EJ	µg/L	5	8/27/2018 9:38:58 PM	R53736
Bromobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Bromodichloromethane	ND	1.4	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Bromoform	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Bromomethane	ND	1.3	15		µg/L	5	8/27/2018 9:38:58 PM	R53736
2-Butanone	ND	6.3	50		µg/L	5	8/27/2018 9:38:58 PM	R53736
Carbon disulfide	ND	1.9	50		µg/L	5	8/27/2018 9:38:58 PM	R53736
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Chlorobenzene	ND	1.5	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Chloroethane	ND	0.82	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
Chloroform	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Chloromethane	ND	1.5	15		µg/L	5	8/27/2018 9:38:58 PM	R53736
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
2,2-Dichloropropane	ND	0.92	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
2-Hexanone	ND	4.5	50		µg/L	5	8/27/2018 9:38:58 PM	R53736
Isopropylbenzene	110	1.1	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
4-Isopropyltoluene	14	1.2	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	8/27/2018 9:38:58 PM	R53736
Methylene Chloride	ND	1.0	15		µg/L	5	8/27/2018 9:38:58 PM	R53736
n-Butylbenzene	11	1.2	15	J	µg/L	5	8/27/2018 9:38:58 PM	R53736
n-Propylbenzene	110	1.2	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
sec-Butylbenzene	27	1.0	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Styrene	ND	1.3	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
tert-Butylbenzene	1.1	1.1	5.0	J	µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	8/27/2018 9:38:58 PM	R53736
Vinyl chloride	ND	0.55	5.0		µg/L	5	8/27/2018 9:38:58 PM	R53736
Xylenes, Total	1500	32	75		µg/L	50	8/27/2018 9:09:49 PM	R53736
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	5	8/27/2018 9:38:58 PM	R53736
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	5	8/27/2018 9:38:58 PM	R53736
Surr: Dibromofluoromethane	114	0	70-130		%Rec	5	8/27/2018 9:38:58 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-64
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 2:35:00 PM
Lab ID: 1808F16-004 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	97.9	0	70-130		%Rec	5	8/27/2018 9:38:58 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	14	0.048	0.25		mg/L	5	8/27/2018 9:38:58 PM	G53736
Surr: BFB	99.0	0	70-130		%Rec	5	8/27/2018 9:38:58 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/28/2018 12:32:20 PM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/28/2018 12:32:20 PM	40016
Surr: DNOP	133	0	76.7-135		%Rec	1	8/28/2018 12:32:20 PM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.43	0.15	0.50	J	mg/L	5	8/24/2018 12:57:18 PM	R53713
Chloride	60	0.15	2.5		mg/L	5	8/24/2018 12:57:18 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 12:57:18 PM	R53713
Bromide	ND	0.13	0.50		mg/L	5	8/24/2018 12:57:18 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 12:57:18 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 12:57:18 PM	R53713
Sulfate	79	1.0	2.5		mg/L	5	8/24/2018 12:57:18 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.087	0.00099	0.0020		mg/L	1	9/11/2018 8:53:26 PM	E54078
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:53:26 PM	E54078
Calcium	27	0.078	1.0		mg/L	1	9/11/2018 8:53:26 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:53:26 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:53:26 PM	E54078
Iron	0.020	0.016	0.020	J	mg/L	1	9/11/2018 8:53:26 PM	E54078
Magnesium	4.0	0.25	1.0		mg/L	1	9/11/2018 8:53:26 PM	E54078
Manganese	0.31	0.00039	0.0020	*	mg/L	1	9/11/2018 8:53:26 PM	E54078
Potassium	2.7	0.11	1.0		mg/L	1	9/11/2018 8:53:26 PM	E54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 8:53:26 PM	E54078
Sodium	230	0.82	5.0		mg/L	5	9/12/2018 2:31:15 PM	A54107
Zinc	0.0077	0.0021	0.010	J	mg/L	1	9/11/2018 8:53:26 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.12	0.0010	0.0020		mg/L	1	9/10/2018 8:23:33 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 8:23:33 PM	40189
Chromium	0.0025	0.0018	0.0060	J	mg/L	1	9/10/2018 8:23:33 PM	40189
Copper	0.0078	0.0041	0.0060		mg/L	1	9/10/2018 8:23:33 PM	40189
Iron	1.4	0.051	0.10	*	mg/L	5	9/12/2018 3:25:35 PM	40189
Manganese	0.34	0.0011	0.0020	*	mg/L	1	9/10/2018 8:23:33 PM	40189
Silver	ND	0.0012	0.0050		mg/L	1	9/10/2018 8:23:33 PM	40189
Zinc	0.0098	0.0033	0.010	J	mg/L	1	9/10/2018 8:23:33 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0061	0.00042	0.0010		mg/L	1	8/27/2018 9:52:09 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 9:52:09 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:52:09 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Uranium	0.046	0.00048	0.0025	*	mg/L	5	8/28/2018 11:01:50 AM	B53766
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0068	0.00041	0.0010		mg/L	1	9/8/2018 12:12:14 PM	40189
Lead	0.0012	0.00023	0.00050		mg/L	1	9/8/2018 12:12:14 PM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 12:12:14 PM	40189
Uranium	0.044	0.00034	0.0025	*	mg/L	5	9/8/2018 1:06:20 PM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000038	0.000038	0.00020	J	mg/L	1	9/11/2018 1:20:04 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Benzoic acid	9.2	6.3	20	J	µg/L	1	9/6/2018 6:35:25 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 6:35:25 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 6:35:25 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 6:35:25 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 6:35:25 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 6:35:25 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Phenol	29	6.0	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 6:35:25 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 6:35:25 PM	40042
Surr: 2-Fluorophenol	39.1	0	15-74.1		%Rec	1	9/6/2018 6:35:25 PM	40042
Surr: Phenol-d5	33.8	0	15-59.8		%Rec	1	9/6/2018 6:35:25 PM	40042
Surr: 2,4,6-Tribromophenol	81.1	0	22.1-112		%Rec	1	9/6/2018 6:35:25 PM	40042
Surr: Nitrobenzene-d5	56.5	0	33.2-94		%Rec	1	9/6/2018 6:35:25 PM	40042
Surr: 2-Fluorobiphenyl	60.3	0	34-90.9		%Rec	1	9/6/2018 6:35:25 PM	40042
Surr: 4-Terphenyl-d14	88.5	0	15-149		%Rec	1	9/6/2018 6:35:25 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2700	8.7	50		µg/L	50	8/27/2018 10:08:06 PM	R53736
Toluene	9.5	0.84	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Ethylbenzene	ND	1.1	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Methyl tert-butyl ether (MTBE)	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2,4-Trimethylbenzene	2.2	1.3	5.0	J	µg/L	5	8/27/2018 10:37:14 PM	R53736
1,3,5-Trimethylbenzene	6.8	1.2	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Naphthalene	ND	1.4	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
1-Methylnaphthalene	ND	1.7	20		µg/L	5	8/27/2018 10:37:14 PM	R53736
2-Methylnaphthalene	ND	1.2	20		µg/L	5	8/27/2018 10:37:14 PM	R53736
Acetone	24	3.9	50	EJ	µg/L	5	8/27/2018 10:37:14 PM	R53736
Bromobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Bromodichloromethane	ND	1.4	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Bromoform	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Bromomethane	ND	1.3	15		µg/L	5	8/27/2018 10:37:14 PM	R53736
2-Butanone	ND	6.3	50		µg/L	5	8/27/2018 10:37:14 PM	R53736
Carbon disulfide	ND	1.9	50		µg/L	5	8/27/2018 10:37:14 PM	R53736
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Chlorobenzene	ND	1.5	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Chloroethane	ND	0.82	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
Chloroform	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Chloromethane	ND	1.5	15		µg/L	5	8/27/2018 10:37:14 PM	R53736
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromomethane	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
2,2-Dichloropropane	ND	0.92	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
2-Hexanone	ND	4.5	50		µg/L	5	8/27/2018 10:37:14 PM	R53736
Isopropylbenzene	ND	1.1	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	8/27/2018 10:37:14 PM	R53736
Methylene Chloride	ND	1.0	15		µg/L	5	8/27/2018 10:37:14 PM	R53736
n-Butylbenzene	ND	1.2	15		µg/L	5	8/27/2018 10:37:14 PM	R53736
n-Propylbenzene	ND	1.2	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Styrene	ND	1.3	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	8/27/2018 10:37:14 PM	R53736
Vinyl chloride	ND	0.55	5.0		µg/L	5	8/27/2018 10:37:14 PM	R53736
Xylenes, Total	38	3.2	7.5		µg/L	5	8/27/2018 10:37:14 PM	R53736
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	5	8/27/2018 10:37:14 PM	R53736
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	5	8/27/2018 10:37:14 PM	R53736
Surr: Dibromofluoromethane	114	0	70-130		%Rec	5	8/27/2018 10:37:14 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-62
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018 3:25:00 PM
Lab ID: 1808F16-005 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Toluene-d8	97.7	0	70-130		%Rec	5	8/27/2018 10:37:14 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	6.3	0.048	0.25		mg/L	5	8/27/2018 10:37:14 PM	G53736
Surr: BFB	98.3	0	70-130		%Rec	5	8/27/2018 10:37:14 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	5.4	0.63	1.0		mg/L	1	8/29/2018 12:39:31 PM	40016
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 12:39:31 PM	40016
Surr: DNOP	121	0	76.7-135		%Rec	1	8/29/2018 12:39:31 PM	40016
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.40	0.15	0.50	J	mg/L	5	8/24/2018 2:36:36 PM	R53713
Chloride	90	0.59	10		mg/L	20	8/24/2018 2:49:01 PM	R53713
Bromide	0.61	0.13	0.50		mg/L	5	8/24/2018 2:36:36 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	8/24/2018 2:36:36 PM	R53713
Sulfate	ND	1.0	2.5		mg/L	5	8/24/2018 2:36:36 PM	R53713
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/10/2018 3:41:06 PM	R54057
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.0	0.0099	0.020	*	mg/L	10	9/12/2018 2:33:15 PM	A54107
Cadmium	ND	0.0010	0.0020		mg/L	1	9/11/2018 8:55:36 PM	E54078
Calcium	89	0.078	1.0		mg/L	1	9/11/2018 8:55:36 PM	E54078
Chromium	ND	0.0013	0.0060		mg/L	1	9/11/2018 8:55:36 PM	E54078
Copper	ND	0.0032	0.0060		mg/L	1	9/11/2018 8:55:36 PM	E54078
Iron	5.8	0.16	0.20	*	mg/L	10	9/12/2018 2:33:15 PM	A54107
Magnesium	16	0.25	1.0		mg/L	1	9/11/2018 8:55:36 PM	E54078
Manganese	1.3	0.0039	0.020	*	mg/L	10	9/12/2018 2:33:15 PM	A54107
Potassium	0.48	0.11	1.0	J	mg/L	1	9/11/2018 8:55:36 PM	E54078
Silver	ND	0.0018	0.0050		mg/L	1	9/11/2018 8:55:36 PM	E54078
Sodium	310	1.6	10		mg/L	10	9/12/2018 2:33:15 PM	A54107
Zinc	0.015	0.0021	0.010		mg/L	1	9/11/2018 8:55:36 PM	E54078
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	3.9	0.010	0.020	*	mg/L	10	9/12/2018 3:27:38 PM	40189
Cadmium	ND	0.00058	0.0020		mg/L	1	9/10/2018 8:25:32 PM	40189
Chromium	ND	0.0018	0.0060		mg/L	1	9/10/2018 8:25:32 PM	40189
Copper	ND	0.0041	0.0060		mg/L	1	9/10/2018 8:25:32 PM	40189
Iron	6.2	0.10	0.20	*	mg/L	10	9/12/2018 3:27:38 PM	40189
Manganese	1.2	0.011	0.020	*	mg/L	10	9/12/2018 3:27:38 PM	40189
Silver	0.0015	0.0012	0.0050	J	mg/L	1	9/10/2018 8:25:32 PM	40189
Zinc	0.0061	0.0033	0.010	J	mg/L	1	9/10/2018 8:25:32 PM	40189
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	8/27/2018 9:54:32 AM	B53710
Lead	ND	0.00017	0.00050		mg/L	1	8/27/2018 9:54:32 AM	B53710
Selenium	ND	0.00076	0.0010		mg/L	1	8/27/2018 9:54:32 AM	B53710
Uranium	0.00023	0.000096	0.00050	J	mg/L	1	8/27/2018 9:54:32 AM	B53710

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	9/8/2018 12:14:35 PM	40189
Lead	0.00061	0.00023	0.00050		mg/L	1	9/8/2018 12:14:35 PM	40189
Selenium	ND	0.00098	0.0010		mg/L	1	9/8/2018 12:14:35 PM	40189
Uranium	0.00017	0.000068	0.00050	J	mg/L	1	9/8/2018 12:14:35 PM	40189
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/11/2018 1:22:15 PM	40249
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzoic acid	37	6.3	20		µg/L	1	9/6/2018 7:04:51 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 7:04:51 PM	40042
2,4-Dimethylphenol	18	5.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 7:04:51 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 7:04:51 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 7:04:51 PM	40042
1-Methylnaphthalene	69	7.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Methylnaphthalene	81	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 7:04:51 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 7:04:51 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Naphthalene	180	5.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 7:04:51 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 7:04:51 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Phenol	23	6.0	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 7:04:51 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 7:04:51 PM	40042
Surr: 2-Fluorophenol	32.8	0	15-74.1		%Rec	1	9/6/2018 7:04:51 PM	40042
Surr: Phenol-d5	39.3	0	15-59.8		%Rec	1	9/6/2018 7:04:51 PM	40042
Surr: 2,4,6-Tribromophenol	76.0	0	22.1-112		%Rec	1	9/6/2018 7:04:51 PM	40042
Surr: Nitrobenzene-d5	54.6	0	33.2-94		%Rec	1	9/6/2018 7:04:51 PM	40042
Surr: 2-Fluorobiphenyl	67.8	0	34-90.9		%Rec	1	9/6/2018 7:04:51 PM	40042
Surr: 4-Terphenyl-d14	81.8	0	15-149		%Rec	1	9/6/2018 7:04:51 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8600	35	200		µg/L	200	8/28/2018 10:47:03 AM	R53736
Toluene	83	3.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Ethylbenzene	1100	4.5	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Methyl tert-butyl ether (MTBE)	45	6.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2,4-Trimethylbenzene	14	5.1	20	J	µg/L	20	8/27/2018 11:06:24 PM	R53736
1,3,5-Trimethylbenzene	37	4.6	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Naphthalene	320	5.8	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
1-Methylnaphthalene	85	6.7	80		µg/L	20	8/27/2018 11:06:24 PM	R53736
2-Methylnaphthalene	110	4.8	80		µg/L	20	8/27/2018 11:06:24 PM	R53736
Acetone	330	16	200	E	µg/L	20	8/27/2018 11:06:24 PM	R53736
Bromobenzene	ND	6.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Bromodichloromethane	ND	5.7	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Bromoform	ND	6.5	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Bromomethane	ND	5.1	60		µg/L	20	8/27/2018 11:06:24 PM	R53736
2-Butanone	ND	25	200		µg/L	20	8/27/2018 11:06:24 PM	R53736
Carbon disulfide	ND	7.7	200		µg/L	20	8/27/2018 11:06:24 PM	R53736
Carbon Tetrachloride	ND	2.7	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Chlorobenzene	ND	5.8	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Chloroethane	ND	3.3	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
Chloroform	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Chloromethane	ND	5.9	60		µg/L	20	8/27/2018 11:06:24 PM	R53736
2-Chlorotoluene	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
4-Chlorotoluene	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
cis-1,2-DCE	ND	7.5	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
Dibromochloromethane	ND	4.7	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Dibromomethane	ND	6.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	8/27/2018 11:06:24 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Dichlorodifluoromethane	ND	20	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1-Dichloroethane	ND	8.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1-Dichloroethene	ND	2.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2-Dichloropropane	ND	3.1	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,3-Dichloropropane	ND	5.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
2,2-Dichloropropane	ND	3.7	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1-Dichloropropene	ND	3.2	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Hexachlorobutadiene	ND	16	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
2-Hexanone	ND	18	200		µg/L	20	8/27/2018 11:06:24 PM	R53736
Isopropylbenzene	51	4.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
4-Isopropyltoluene	ND	4.8	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	8/27/2018 11:06:24 PM	R53736
Methylene Chloride	ND	4.1	60		µg/L	20	8/27/2018 11:06:24 PM	R53736
n-Butylbenzene	20	5.0	60	J	µg/L	20	8/27/2018 11:06:24 PM	R53736
n-Propylbenzene	170	4.9	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
sec-Butylbenzene	7.0	4.0	20	J	µg/L	20	8/27/2018 11:06:24 PM	R53736
Styrene	ND	5.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
tert-Butylbenzene	ND	4.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
trans-1,2-DCE	ND	3.7	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Trichlorofluoromethane	ND	3.4	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
1,2,3-Trichloropropane	ND	11	40		µg/L	20	8/27/2018 11:06:24 PM	R53736
Vinyl chloride	ND	2.2	20		µg/L	20	8/27/2018 11:06:24 PM	R53736
Xylenes, Total	510	13	30		µg/L	20	8/27/2018 11:06:24 PM	R53736
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	20	8/27/2018 11:06:24 PM	R53736
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	20	8/27/2018 11:06:24 PM	R53736
Surr: Dibromofluoromethane	121	0	70-130		%Rec	20	8/27/2018 11:06:24 PM	R53736
Surr: Toluene-d8	94.3	0	70-130		%Rec	20	8/27/2018 11:06:24 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/22/2018
Lab ID: 1808F16-006
Matrix: AQUEOUS
Received Date: 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	34	0.19	1.0		mg/L	20	8/27/2018 11:06:24 PM	G53736
Surr: BFB	96.3	0	70-130		%Rec	20	8/27/2018 11:06:24 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808F16-007 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.43	0.17	1.0	J	µg/L	1	8/27/2018 11:35:34 PM	R53736
Toluene	ND	0.17	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Naphthalene	0.42	0.29	2.0	J	µg/L	1	8/27/2018 11:35:34 PM	R53736
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
2-Methylnaphthalene	0.30	0.24	4.0	J	µg/L	1	8/27/2018 11:35:34 PM	R53736
Acetone	8.8	0.79	10	EJ	µg/L	1	8/27/2018 11:35:34 PM	R53736
Bromobenzene	ND	0.32	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Bromoform	ND	0.32	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Bromomethane	ND	0.26	3.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
2-Butanone	ND	1.3	10		µg/L	1	8/27/2018 11:35:34 PM	R53736
Carbon disulfide	ND	0.39	10		µg/L	1	8/27/2018 11:35:34 PM	R53736
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Chloroethane	ND	0.16	2.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Chloroform	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Chloromethane	ND	0.29	3.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Dibromomethane	ND	0.32	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/27/2018 11:35:34 PM	R53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808F16-007 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
2-Hexanone	ND	0.91	10		µg/L	1	8/27/2018 11:35:34 PM	R53736
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/27/2018 11:35:34 PM	R53736
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Styrene	ND	0.25	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/27/2018 11:35:34 PM	R53736
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/27/2018 11:35:34 PM	R53736
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	8/27/2018 11:35:34 PM	R53736
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	8/27/2018 11:35:34 PM	R53736
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	8/27/2018 11:35:34 PM	R53736
Surr: Toluene-d8	98.8	0	70-130		%Rec	1	8/27/2018 11:35:34 PM	R53736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	8/27/2018 11:35:34 PM	G53736
Surr: BFB	102	0	70-130		%Rec	1	8/27/2018 11:35:34 PM	G53736

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-E**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **E54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-E**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **E54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	87.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	95.0	50	150			J
Calcium	0.49	1.0	0.5000	0	99.0	50	150			J
Chromium	0.0048	0.0060	0.006000	0	80.8	50	150			J
Copper	0.0078	0.0060	0.006000	0	130	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.49	1.0	0.5000	0	97.4	50	150			J
Manganese	0.0015	0.0020	0.002000	0	75.0	50	150			J
Potassium	0.49	1.0	0.5000	0	98.4	50	150			J
Silver	0.0047	0.0050	0.005000	0	93.6	50	150			J
Sodium	0.71	1.0	0.5000	0	142	50	150			J
Zinc	0.0051	0.010	0.005000	0	101	50	150			J

Sample ID **LCS-E**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **E54078**	RunNo: **54078**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786864** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Calcium	48	1.0	50.00	0	96.7	85	115			
Chromium	0.45	0.0060	0.5000	0	90.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-E**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**E54078**		RunNo:	**54078**					
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786864**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.50	0.0060	0.5000	0	99.5	85	115			
Iron		0.48	0.020	0.5000	0	96.6	85	115			
Magnesium		48	1.0	50.00	0	95.5	85	115			
Manganese		0.48	0.0020	0.5000	0	95.4	85	115			
Potassium		48	1.0	50.00	0	96.9	85	115			
Silver		0.10	0.0050	0.1000	0	100	85	115			
Sodium		53	1.0	50.00	0	106	85	115			
Zinc		0.48	0.010	0.5000	0	96.4	85	115			

Sample ID	**1808F16-001EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**FB04**	Batch ID:	**E54078**		RunNo:	**54078**					
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786901**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		0.50	0.0020	0.5000	0	101	70	130			
Cadmium		0.52	0.0020	0.5000	0	103	70	130			
Calcium		49	1.0	50.00	0	97.4	70	130			
Chromium		0.45	0.0060	0.5000	0	89.9	70	130			
Copper		0.48	0.0060	0.5000	0	95.9	70	130			
Iron		0.53	0.020	0.5000	0	105	70	130			
Magnesium		47	1.0	50.00	0	94.3	70	130			
Manganese		0.48	0.0020	0.5000	0	95.0	70	130			
Potassium		47	1.0	50.00	0	95.0	70	130			
Silver		0.10	0.0050	0.1000	0	105	70	130			
Sodium		51	1.0	50.00	0	102	70	130			
Zinc		0.51	0.010	0.5000	0.01380	98.6	70	130			

Sample ID	**1808F16-001EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**FB04**	Batch ID:	**E54078**		RunNo:	**54078**					
Prep Date:		Analysis Date:	**9/11/2018**		SeqNo:	**1786902**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium		0.50	0.0020	0.5000	0	100	70	130	0.779	20	
Cadmium		0.51	0.0020	0.5000	0	103	70	130	0.884	20	
Calcium		51	1.0	50.00	0	102	70	130	4.66	20	
Chromium		0.44	0.0060	0.5000	0	88.7	70	130	1.30	20	
Copper		0.48	0.0060	0.5000	0	96.8	70	130	0.880	20	
Iron		0.52	0.020	0.5000	0	104	70	130	1.52	20	
Magnesium		49	1.0	50.00	0	98.9	70	130	4.69	20	
Manganese		0.48	0.0020	0.5000	0	96.1	70	130	1.15	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808F16-001EMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**FB04**	Batch ID:	**E54078**	RunNo:	**54078**
Prep Date:		Analysis Date:	**9/11/2018**	SeqNo:	**1786902** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	50	1.0	50.00	0	99.2	70	130	4.41	20	
Silver	0.10	0.0050	0.1000	0	102	70	130	2.29	20	
Sodium	53	1.0	50.00	0	107	70	130	4.46	20	
Zinc	0.51	0.010	0.5000	0.01380	98.3	70	130	0.342	20	

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**A54107**	RunNo:	**54107**
Prep Date:		Analysis Date:	**9/12/2018**	SeqNo:	**1788085** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**A54107**	RunNo:	**54107**
Prep Date:		Analysis Date:	**9/12/2018**	SeqNo:	**1788086** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Sodium	0.53	1.0	0.5000	0	107	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A54107**	RunNo:	**54107**
Prep Date:		Analysis Date:	**9/12/2018**	SeqNo:	**1788087** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40189**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40189**	RunNo: **54033**
Prep Date: **9/6/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785030** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-40189**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40189**	RunNo: **54033**
Prep Date: **9/6/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785031** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Cadmium	0.0019	0.0020	0.002000	0	93.0	50	150			J
Chromium	0.0055	0.0060	0.006000	0	92.0	50	150			J
Copper	0.0062	0.0060	0.006000	0	103	50	150			
Iron	0.021	0.020	0.02000	0	105	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0050	0.0050	0.005000	0	101	50	150			
Zinc	0.0068	0.010	0.005000	0	135	50	150			J

Sample ID **LCS-40189**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40189**	RunNo: **54033**
Prep Date: **9/6/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.8	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.48	0.0060	0.5000	0	95.1	85	115			
Iron	0.50	0.020	0.5000	0	99.8	85	115			
Manganese	0.47	0.0020	0.5000	0	93.5	85	115			
Silver	0.094	0.0050	0.1000	0	93.8	85	115			
Zinc	0.50	0.010	0.5000	0	99.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808F16-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB04** Batch ID: **40189** RunNo: **54033**

Prep Date: **9/6/2018** Analysis Date: **9/10/2018** SeqNo: **1785477** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	70	130			
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.45	0.0060	0.5000	0	90.8	70	130			
Copper	0.49	0.0060	0.5000	0	97.7	70	130			
Iron	0.48	0.020	0.5000	0	95.8	70	130			
Manganese	0.46	0.0020	0.5000	0	91.2	70	130			
Silver	0.12	0.0050	0.1000	0	116	70	130			
Zinc	0.45	0.010	0.5000	0	91.0	70	130			

Sample ID **1808F16-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB04** Batch ID: **40189** RunNo: **54033**

Prep Date: **9/6/2018** Analysis Date: **9/10/2018** SeqNo: **1785478** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.6	70	130	7.10	20	
Cadmium	0.50	0.0020	0.5000	0	99.7	70	130	1.45	20	
Chromium	0.45	0.0060	0.5000	0	90.2	70	130	0.663	20	
Copper	0.49	0.0060	0.5000	0	97.8	70	130	0.106	20	
Iron	0.48	0.020	0.5000	0	97.0	70	130	1.23	20	
Manganese	0.46	0.0020	0.5000	0	91.7	70	130	0.573	20	
Silver	0.12	0.0050	0.1000	0	115	70	130	0.555	20	
Zinc	0.45	0.010	0.5000	0	90.5	70	130	0.551	20	

Sample ID **1808F16-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **EB04** Batch ID: **40189** RunNo: **54033**

Prep Date: **9/6/2018** Analysis Date: **9/10/2018** SeqNo: **1785480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	70	130			
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.45	0.0060	0.5000	0	91.0	70	130			
Copper	0.49	0.0060	0.5000	0.004570	97.0	70	130			
Iron	0.48	0.020	0.5000	0	95.6	70	130			
Manganese	0.46	0.0020	0.5000	0	91.3	70	130			
Silver	0.12	0.0050	0.1000	0	115	70	130			
Zinc	0.45	0.010	0.5000	0	90.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808F16-002FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**EB04**	Batch ID:	**40189**	RunNo:	**54033**
Prep Date:	**9/6/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.1	70	130	7.32	20	
Cadmium	0.50	0.0020	0.5000	0	99.3	70	130	1.06	20	
Chromium	0.45	0.0060	0.5000	0	89.6	70	130	1.54	20	
Copper	0.49	0.0060	0.5000	0.004570	97.0	70	130	0.0592	20	
Iron	0.50	0.020	0.5000	0	99.9	70	130	4.40	20	
Manganese	0.46	0.0020	0.5000	0	91.7	70	130	0.503	20	
Silver	0.12	0.0050	0.1000	0	116	70	130	0.182	20	
Zinc	0.45	0.010	0.5000	0	89.3	70	130	1.47	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771843** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771844** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.2	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.1	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.4	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.6	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53710**	RunNo: **53710**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1771845** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.012	0.00050	0.01250	0	99.2	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Uranium	0.012	0.00050	0.01250	0	98.3	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53766**	RunNo: **53766**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773831** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53766**	RunNo: **53766**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	99.6	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B53766**	RunNo:	**53766**
Prep Date:		Analysis Date:	**8/28/2018**	SeqNo:	**1773836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40189**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40189**	RunNo:	**54014**					
Prep Date:	**9/6/2018**	Analysis Date:	**9/8/2018**	SeqNo:	**1784200**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40189**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40189**	RunNo:	**54014**					
Prep Date:	**9/6/2018**	Analysis Date:	**9/8/2018**	SeqNo:	**1784201**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.4	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00092	0.0010	0.001000	0	91.5	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.6	50	150			J

Sample ID	**MSLCS-40189**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40189**	RunNo:	**54014**					
Prep Date:	**9/6/2018**	Analysis Date:	**9/8/2018**	SeqNo:	**1784202**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			
Uranium	0.012	0.00050	0.01250	0	92.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40249**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40249**	RunNo:	**54068**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1786516**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000050	0.00020								J

Sample ID	**LCS-40249**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40249**	RunNo:	**54068**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1786517**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.8	80	120			

Sample ID	**1808F16-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB04**	Batch ID:	**40249**	RunNo:	**54068**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1786519**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.9	75	125			

Sample ID	**1808F16-001FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB04**	Batch ID:	**40249**	RunNo:	**54068**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1786520**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.9	75	125	2.08	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R53713** RunNo: **53713**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771926** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R53713** RunNo: **53713**
Prep Date: Analysis Date: **8/24/2018** SeqNo: **1771927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.0	90	110			
Chloride	4.7	0.50	5.000	0	94.7	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.4	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.5	90	110			
Sulfate	9.4	0.50	10.00	0	94.5	90	110			

Sample ID **MB** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R54057** RunNo: **54057**
Prep Date: Analysis Date: **9/10/2018** SeqNo: **1786094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	0.10	0.20								J

Sample ID **LCS** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R54057** RunNo: **54057**
Prep Date: Analysis Date: **9/10/2018** SeqNo: **1786095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40016**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40016**	RunNo: **53745**
Prep Date: **8/28/2018**	Analysis Date: **8/28/2018**	SeqNo: **1773212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		117	76.7	135			

Sample ID **LCS-40016**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40016**	RunNo: **53745**
Prep Date: **8/28/2018**	Analysis Date: **8/28/2018**	SeqNo: **1773213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	110	70	130			
Surr: DNOP	0.60		0.5000		119	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773176** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID **1808f16-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-63**	Batch ID: **R53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773181** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	11000	20	400.0	9854	223	60.5	137			ES
Toluene	480	20	400.0	84.37	99.3	70	130			
Chlorobenzene	410	20	400.0	0	102	70	130			
1,1-Dichloroethene	500	20	400.0	0	125	70	130			
Trichloroethene (TCE)	460	20	400.0	0	115	70	130			
Surr: 1,2-Dichloroethane-d4	230		200.0		116	70	130			
Surr: 4-Bromofluorobenzene	200		200.0		102	70	130			
Surr: Dibromofluoromethane	240		200.0		118	70	130			
Surr: Toluene-d8	200		200.0		98.2	70	130			

Sample ID **1808f16-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-63**	Batch ID: **R53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773182** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	10000	20	400.0	9854	45.3	60.5	137	6.85	20	ES
Toluene	450	20	400.0	84.37	92.6	70	130	5.80	20	
Chlorobenzene	380	20	400.0	0	94.4	70	130	7.89	20	
1,1-Dichloroethene	470	20	400.0	0	118	70	130	6.44	20	
Trichloroethene (TCE)	420	20	400.0	0	106	70	130	7.93	20	
Surr: 1,2-Dichloroethane-d4	220		200.0		111	70	130	0	0	
Surr: 4-Bromofluorobenzene	220		200.0		110	70	130	0	0	
Surr: Dibromofluoromethane	220		200.0		112	70	130	0	0	
Surr: Toluene-d8	190		200.0		93.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773190** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	3.6	10								EJ
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773190** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40042**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40042**	RunNo: **53982**
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782617** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	64.8	55.1	104			
4-Chloro-3-methylphenol	150	10	200.0	0	75.1	57	115			
2-Chlorophenol	140	10	200.0	0	70.8	43.4	112			
1,4-Dichlorobenzene	61	10	100.0	0	60.9	38	95.2			
2,4-Dinitrotoluene	63	10	100.0	0	62.7	55.1	96.7			
N-Nitrosodi-n-propylamine	81	10	100.0	0	80.5	55	112			
4-Nitrophenol	110	10	200.0	0	52.7	16.6	93			
Pentachlorophenol	130	20	200.0	0	65.2	43.2	104			
Phenol	97	10	200.0	0	48.5	21.3	85.7			
Pyrene	79	10	100.0	0	79.0	64.9	105			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.2	42.6	107			
Surr: 2-Fluorophenol	110		200.0		54.4	15	74.1			
Surr: Phenol-d5	100		200.0		52.0	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		67.7	22.1	112			
Surr: Nitrobenzene-d5	66		100.0		66.0	33.2	94			
Surr: 2-Fluorobiphenyl	63		100.0		62.9	34	90.9			
Surr: 4-Terphenyl-d14	74		100.0		73.8	15	149			

Sample ID **lcsd-40042**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40042**	RunNo: **53982**
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782618** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.2	55.1	104	17.5	34.9	
4-Chloro-3-methylphenol	170	10	200.0	0	84.0	57	115	11.2	30.2	
2-Chlorophenol	150	10	200.0	0	73.5	43.4	112	3.77	49.5	
1,4-Dichlorobenzene	68	10	100.0	0	67.6	38	95.2	10.3	43.2	
2,4-Dinitrotoluene	80	10	100.0	0	79.5	55.1	96.7	23.6	49.9	
N-Nitrosodi-n-propylamine	88	10	100.0	0	87.7	55	112	8.51	42.1	
4-Nitrophenol	130	10	200.0	0	63.0	16.6	93	17.7	31.5	
Pentachlorophenol	150	20	200.0	0	76.8	43.2	104	16.4	52.5	
Phenol	97	10	200.0	0	48.6	21.3	85.7	0.247	54.4	
Pyrene	91	10	100.0	0	90.8	64.9	105	13.9	30.7	
1,2,4-Trichlorobenzene	83	10	100.0	0	82.8	42.6	107	15.1	48.1	
Surr: 2-Fluorophenol	120		200.0		58.6	15	74.1	0	0	
Surr: Phenol-d5	110		200.0		53.4	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.0	22.1	112	0	0	
Surr: Nitrobenzene-d5	73		100.0		72.6	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		72.7	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**lcsd-40042**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**40042**		RunNo:	**53982**				
Prep Date:	**8/29/2018**	Analysis Date:	**9/6/2018**		SeqNo:	**1782618**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	67		100.0		67.0	15	149	0	0	

Sample ID	**mb-40042**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**40042**		RunNo:	**53982**				
Prep Date:	**8/29/2018**	Analysis Date:	**9/6/2018**		SeqNo:	**1782620**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40042**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40042**	RunNo: **53982**	
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782620**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40042**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**						
Client ID: **PBW**	Batch ID: **40042**	RunNo: **53982**						
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782620**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.1	15	74.1			
Surr: Phenol-d5	120		200.0		61.7	15	59.8			S
Surr: 2,4,6-Tribromophenol	130		200.0		63.4	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		69.4	33.2	94			
Surr: 2-Fluorobiphenyl	66		100.0		66.0	34	90.9			
Surr: 4-Terphenyl-d14	67		100.0		67.2	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F16**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773172** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	105	70	130			
Surr: BFB	9.9		10.00		99.2	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53736**	RunNo: **53736**
Prep Date:	Analysis Date: **8/27/2018**	SeqNo: **1773174** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	11		10.00		106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1808F16 | RcptNo: 1

Received By: **Jazzmine Burkhead** 8/24/2018 8:45:00 AM

Completed By: **Ashley Gallegos** 8/24/2018 10:08:42 AM

Reviewed By: ENM 8/24/18 labeled by: JAB 08/24/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)

Adjusted? No

Checked by: JAB 08/24/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F16	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	1055	H_2O	FB04	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3												X	X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
8/23/18	0700			08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	1115	H_2O	EB04	40ml VOA-5	HCl	1808FL46-003			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/23/18	0700			08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F16	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	1240	H_2O	OW-63	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/23/18	0700			08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Consider

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F16	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	1435	H_2O	OW-64	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/23/18	0700		Tracy Burkhalter	08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F16	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	1525	H_2O	OW-62	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/23/18	0700		Jaynie Bucktrea	08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F16	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/22/18	—	H_2O	DUP 04	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber - 1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/22/18	—	H_2O	TRIP BLANK	40 ml VOA-3	HCl	-007										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/23/18	0700			08/24/18	08:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808F55

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 13 sample(s) on 8/24/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1808F55**
Date Reported: **9/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.067	0.0049	0.0095		µg/L	1	9/4/2018 1:45:36 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.0	0.63	1.0		mg/L	1	8/29/2018 10:36:23 AM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 10:36:23 AM	40036
Surr: DNOP	115	0	76.7-135		%Rec	1	8/29/2018 10:36:23 AM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	17	0.49	1.0		mg/L	20	8/29/2018 3:48:36 PM	G53798
Surr: BFB	142	0	69.3-150		%Rec	20	8/29/2018 3:48:36 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.47	0.15	0.50	J	mg/L	5	8/24/2018 4:53:11 PM	R53713
Chloride	140	0.59	10		mg/L	20	8/24/2018 5:05:36 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 4:53:11 PM	R53713
Bromide	0.57	0.13	0.50		mg/L	5	8/24/2018 4:53:11 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 4:53:11 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 4:53:11 PM	R53713
Sulfate	20	1.0	2.5		mg/L	5	8/24/2018 4:53:11 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.96	0.00099	0.0020		mg/L	1	9/13/2018 12:27:56 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:27:56 PM	B54126
Calcium	34	0.078	1.0		mg/L	1	9/13/2018 12:27:56 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:27:56 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:27:56 PM	B54126
Iron	0.99	0.016	0.020	*	mg/L	1	9/13/2018 12:27:56 PM	B54126
Magnesium	7.2	0.25	1.0		mg/L	1	9/13/2018 12:27:56 PM	B54126
Manganese	0.55	0.00039	0.0020	*	mg/L	1	9/13/2018 12:27:56 PM	B54126
Potassium	1.8	0.11	1.0		mg/L	1	9/13/2018 12:27:56 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 12:27:56 PM	B54126
Sodium	240	0.82	5.0		mg/L	5	9/13/2018 12:29:53 PM	B54126
Zinc	0.0081	0.0021	0.010	J	mg/L	1	9/13/2018 12:27:56 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.84	0.0050	0.010		mg/L	5	9/13/2018 6:22:33 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:08:48 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:08:48 PM	40243
Copper	0.012	0.0041	0.0060		mg/L	1	9/14/2018 5:20:55 PM	40243
Iron	4.8	0.10	0.20	*	mg/L	10	9/13/2018 6:27:55 PM	40243
Manganese	0.49	0.0011	0.0020	*	mg/L	1	9/13/2018 5:08:48 PM	40243
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 5:08:48 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.018	0.0033	0.010		mg/L	1	9/18/2018 4:25:43 PM	40395
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0024	0.00042	0.0010		mg/L	1	8/29/2018 11:07:31 AM	B53782
Lead	0.00088	0.00017	0.00050		mg/L	1	8/29/2018 11:07:31 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:07:31 AM	B53782
Uranium	0.019	0.00048	0.0025		mg/L	5	8/29/2018 12:17:04 PM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0024	0.00041	0.0010		mg/L	1	9/11/2018 6:08:30 PM	40243
Lead	0.013	0.00023	0.00050		mg/L	1	9/11/2018 6:08:30 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:08:30 PM	40243
Uranium	0.019	0.000068	0.00050		mg/L	1	9/11/2018 6:08:30 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/14/2018 11:16:48 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Benzoic acid	16	6.3	20	J	µg/L	1	9/6/2018 8:03:36 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 8:03:36 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 8:03:36 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
1,4-Dichlorobenzene	6.2	5.8	10	J	µg/L	1	9/6/2018 8:03:36 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 8:03:36 PM	40042
1-Methylnaphthalene	68	7.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2-Methylnaphthalene	84	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 8:03:36 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 8:03:36 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Naphthalene	280	10	20		µg/L	2	9/10/2018 8:26:56 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 8:03:36 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 8:03:36 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Phenol	18	6.0	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 8:03:36 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 8:03:36 PM	40042
Surr: 2-Fluorophenol	48.5	0	15-74.1		%Rec	1	9/6/2018 8:03:36 PM	40042
Surr: Phenol-d5	42.3	0	15-59.8		%Rec	1	9/6/2018 8:03:36 PM	40042
Surr: 2,4,6-Tribromophenol	80.5	0	22.1-112		%Rec	1	9/6/2018 8:03:36 PM	40042
Surr: Nitrobenzene-d5	75.1	0	33.2-94		%Rec	1	9/6/2018 8:03:36 PM	40042
Surr: 2-Fluorobiphenyl	77.9	0	34-90.9		%Rec	1	9/6/2018 8:03:36 PM	40042
Surr: 4-Terphenyl-d14	90.1	0	15-149		%Rec	1	9/6/2018 8:03:36 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1300	17	100		µg/L	100	8/28/2018 3:17:00 PM	R53749
Toluene	14	1.7	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Ethylbenzene	36	2.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Methyl tert-butyl ether (MTBE)	37	3.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2,4-Trimethylbenzene	530	2.5	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,3,5-Trimethylbenzene	35	2.3	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2-Dichloroethane (EDC)	14	4.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Naphthalene	310	2.9	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
1-Methylnaphthalene	51	3.4	40		µg/L	10	8/28/2018 3:42:00 PM	R53749
2-Methylnaphthalene	60	2.4	40		µg/L	10	8/28/2018 3:42:00 PM	R53749
Acetone	ND	7.9	100		µg/L	10	8/28/2018 3:42:00 PM	R53749
Bromobenzene	ND	3.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Bromodichloromethane	ND	2.8	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Bromoform	ND	3.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Bromomethane	ND	2.6	30		µg/L	10	8/28/2018 3:42:00 PM	R53749
2-Butanone	ND	13	100		µg/L	10	8/28/2018 3:42:00 PM	R53749
Carbon disulfide	ND	3.9	100		µg/L	10	8/28/2018 3:42:00 PM	R53749
Carbon Tetrachloride	ND	1.3	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Chlorobenzene	ND	2.9	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Chloroethane	ND	1.6	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
Chloroform	ND	4.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Chloromethane	ND	2.9	30		µg/L	10	8/28/2018 3:42:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	4.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
4-Chlorotoluene	ND	4.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
cis-1,2-DCE	ND	3.8	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
Dibromochloromethane	ND	2.4	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Dibromomethane	ND	3.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,4-Dichlorobenzene	8.2	4.0	10	J	µg/L	10	8/28/2018 3:42:00 PM	R53749
Dichlorodifluoromethane	ND	10	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1-Dichloroethane	24	4.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1-Dichloroethene	76	1.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2-Dichloropropane	ND	1.5	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,3-Dichloropropane	ND	2.7	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
2,2-Dichloropropane	ND	1.8	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Hexachlorobutadiene	ND	8.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
2-Hexanone	ND	9.1	100		µg/L	10	8/28/2018 3:42:00 PM	R53749
Isopropylbenzene	67	2.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
4-Isopropyltoluene	6.3	2.4	10	J	µg/L	10	8/28/2018 3:42:00 PM	R53749
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	8/28/2018 3:42:00 PM	R53749
Methylene Chloride	ND	2.1	30		µg/L	10	8/28/2018 3:42:00 PM	R53749
n-Butylbenzene	34	2.5	30		µg/L	10	8/28/2018 3:42:00 PM	R53749
n-Propylbenzene	88	2.4	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
sec-Butylbenzene	13	2.0	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Styrene	ND	2.5	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
tert-Butylbenzene	ND	2.2	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1,1-Trichloroethane	5.5	1.5	10	J	µg/L	10	8/28/2018 3:42:00 PM	R53749
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Trichloroethene (TCE)	200	2.6	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Trichlorofluoromethane	ND	1.7	10		µg/L	10	8/28/2018 3:42:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-37
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 12:30:00 PM
Lab ID: 1808F55-001
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	8/28/2018 3:42:00 PM	R53749
Vinyl chloride	ND	1.1	10		µg/L	10	8/28/2018 3:42:00 PM	R53749
Xylenes, Total	370	6.4	15		µg/L	10	8/28/2018 3:42:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	10	8/28/2018 3:42:00 PM	R53749
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	10	8/28/2018 3:42:00 PM	R53749
Surr: Dibromofluoromethane	108	0	70-130		%Rec	10	8/28/2018 3:42:00 PM	R53749
Surr: Toluene-d8	98.0	0	70-130		%Rec	10	8/28/2018 3:42:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/4/2018 2:00:43 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 11:50:12 AM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 11:50:12 AM	40036
Surr: DNOP	113	0	76.7-135		%Rec	1	8/29/2018 11:50:12 AM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 5:22:39 PM	G53798
Surr: BFB	95.8	0	69.3-150		%Rec	1	8/29/2018 5:22:39 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 5:18:00 PM	R53713
Chloride	ND	0.029	0.50		mg/L	1	8/24/2018 5:18:00 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/24/2018 5:18:00 PM	R53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 5:18:00 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	8/24/2018 5:18:00 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/24/2018 5:18:00 PM	R53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 5:18:00 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/13/2018 12:38:30 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:38:30 PM	B54126
Calcium	ND	0.078	1.0		mg/L	1	9/13/2018 12:38:30 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:38:30 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:38:30 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 12:38:30 PM	B54126
Magnesium	ND	0.25	1.0		mg/L	1	9/13/2018 12:38:30 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 12:38:30 PM	B54126
Potassium	ND	0.11	1.0		mg/L	1	9/13/2018 12:38:30 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 12:38:30 PM	B54126
Sodium	ND	0.16	1.0		mg/L	1	9/13/2018 12:38:30 PM	B54126
Zinc	0.011	0.0021	0.010		mg/L	1	9/13/2018 12:38:30 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 5:14:37 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:14:37 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:14:37 PM	40243
Copper	0.0051	0.0041	0.0060	J	mg/L	1	9/13/2018 5:14:37 PM	40243
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 5:14:37 PM	40243
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 5:14:37 PM	40243
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 5:14:37 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0037	0.0033	0.010	J	mg/L	1	9/13/2018 5:14:37 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/29/2018 11:17:06 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:17:06 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:17:06 AM	B53782
Uranium	ND	0.000096	0.00050		mg/L	1	8/29/2018 11:17:06 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/11/2018 6:10:48 PM	40243
Lead	ND	0.00023	0.00050		mg/L	1	9/11/2018 6:10:48 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:10:48 PM	40243
Uranium	ND	0.000068	0.00050		mg/L	1	9/11/2018 6:10:48 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000065	0.000038	0.00020	J	mg/L	1	9/14/2018 11:23:29 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Benzoic acid	7.8	6.3	20	J	µg/L	1	9/6/2018 8:32:59 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 8:32:59 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 8:32:59 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 8:32:59 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 8:32:59 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 8:32:59 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 8:32:59 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 8:32:59 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 8:32:59 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 8:32:59 PM	40042
Surr: 2-Fluorophenol	43.3	0	15-74.1		%Rec	1	9/6/2018 8:32:59 PM	40042
Surr: Phenol-d5	35.0	0	15-59.8		%Rec	1	9/6/2018 8:32:59 PM	40042
Surr: 2,4,6-Tribromophenol	60.1	0	22.1-112		%Rec	1	9/6/2018 8:32:59 PM	40042
Surr: Nitrobenzene-d5	60.0	0	33.2-94		%Rec	1	9/6/2018 8:32:59 PM	40042
Surr: 2-Fluorobiphenyl	60.2	0	34-90.9		%Rec	1	9/6/2018 8:32:59 PM	40042
Surr: 4-Terphenyl-d14	76.2	0	15-149		%Rec	1	9/6/2018 8:32:59 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.31	0.17	1.0	J	µg/L	1	8/28/2018 4:55:00 PM	R53749
Toluene	0.21	0.17	1.0	J	µg/L	1	8/28/2018 4:55:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Naphthalene	0.58	0.29	2.0	J	µg/L	1	8/28/2018 4:55:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
2-Methylnaphthalene	0.33	0.24	4.0	J	µg/L	1	8/28/2018 4:55:00 PM	R53749
Acetone	6.2	0.79	10	J	µg/L	1	8/28/2018 4:55:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 4:55:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 4:55:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 4:55:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 4:55:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 4:55:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:10:00 PM
Lab ID: 1808F55-002
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 4:55:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 4:55:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	8/28/2018 4:55:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.5	0	70-130		%Rec	1	8/28/2018 4:55:00 PM	R53749
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	8/28/2018 4:55:00 PM	R53749
Surr: Toluene-d8	96.4	0	70-130		%Rec	1	8/28/2018 4:55:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 2:15:52 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 12:14:56 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 12:14:56 PM	40036
Surr: DNOP	114	0	76.7-135		%Rec	1	8/29/2018 12:14:56 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 5:46:10 PM	G53798
Surr: BFB	92.4	0	69.3-150		%Rec	1	8/29/2018 5:46:10 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 5:42:50 PM	R53713
Chloride	0.25	0.029	0.50	J	mg/L	1	8/24/2018 5:42:50 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/24/2018 5:42:50 PM	R53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 5:42:50 PM	R53713
Nitrogen, Nitrate (As N)	0.037	0.0066	0.10	J	mg/L	1	8/24/2018 5:42:50 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/24/2018 5:42:50 PM	R53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 5:42:50 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/13/2018 12:44:52 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:44:52 PM	B54126
Calcium	ND	0.078	1.0		mg/L	1	9/13/2018 12:44:52 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:44:52 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:44:52 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 12:44:52 PM	B54126
Magnesium	ND	0.25	1.0		mg/L	1	9/13/2018 12:44:52 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 12:44:52 PM	B54126
Potassium	ND	0.11	1.0		mg/L	1	9/13/2018 12:44:52 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 12:44:52 PM	B54126
Sodium	ND	0.16	1.0		mg/L	1	9/13/2018 12:44:52 PM	B54126
Zinc	0.015	0.0021	0.010		mg/L	1	9/13/2018 12:44:52 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 5:27:10 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:27:10 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:27:10 PM	40243
Copper	0.0046	0.0041	0.0060	J	mg/L	1	9/13/2018 5:27:10 PM	40243
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 5:27:10 PM	40243
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 5:27:10 PM	40243
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 5:27:10 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0080	0.0033	0.010	J	mg/L	1	9/13/2018 5:27:10 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/29/2018 11:19:28 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:19:28 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:19:28 AM	B53782
Uranium	ND	0.000096	0.00050		mg/L	1	8/29/2018 11:19:28 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/11/2018 6:13:05 PM	40243
Lead	ND	0.00023	0.00050		mg/L	1	9/11/2018 6:13:05 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:13:05 PM	40243
Uranium	ND	0.000068	0.00050		mg/L	1	9/11/2018 6:13:05 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000075	0.000038	0.00020	J	mg/L	1	9/14/2018 11:25:43 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Benzoic acid	6.5	6.3	20	J	µg/L	1	9/6/2018 9:02:19 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 9:02:19 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 9:02:19 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 9:02:19 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 9:02:19 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 9:02:19 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 9:02:19 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 9:02:19 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 9:02:19 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 9:02:19 PM	40042
Surr: 2-Fluorophenol	27.8	0	15-74.1		%Rec	1	9/6/2018 9:02:19 PM	40042
Surr: Phenol-d5	23.0	0	15-59.8		%Rec	1	9/6/2018 9:02:19 PM	40042
Surr: 2,4,6-Tribromophenol	40.9	0	22.1-112		%Rec	1	9/6/2018 9:02:19 PM	40042
Surr: Nitrobenzene-d5	45.4	0	33.2-94		%Rec	1	9/6/2018 9:02:19 PM	40042
Surr: 2-Fluorobiphenyl	44.2	0	34-90.9		%Rec	1	9/6/2018 9:02:19 PM	40042
Surr: 4-Terphenyl-d14	70.2	0	15-149		%Rec	1	9/6/2018 9:02:19 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Toluene	0.18	0.17	1.0	J	µg/L	1	8/28/2018 5:19:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Naphthalene	ND	0.29	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Acetone	7.4	0.79	10	J	µg/L	1	8/28/2018 5:19:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 5:19:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 5:19:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 5:19:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 5:19:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 5:19:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 2:30:00 PM
Lab ID: 1808F55-003
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 5:19:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 5:19:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/28/2018 5:19:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.3	0	70-130		%Rec	1	8/28/2018 5:19:00 PM	R53749
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	8/28/2018 5:19:00 PM	R53749
Surr: Toluene-d8	96.5	0	70-130		%Rec	1	8/28/2018 5:19:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 2:30:58 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 1:04:14 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 1:04:14 PM	40036
Surr: DNOP	115	0	76.7-135		%Rec	1	8/29/2018 1:04:14 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.49	0.024	0.050		mg/L	1	8/29/2018 6:09:46 PM	G53798
Surr: BFB	103	0	69.3-150		%Rec	1	8/29/2018 6:09:46 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.67	0.15	0.50		mg/L	5	8/24/2018 6:07:40 PM	R53713
Chloride	170	0.59	10		mg/L	20	8/24/2018 6:20:04 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 6:07:40 PM	R53713
Bromide	1.3	0.13	0.50		mg/L	5	8/24/2018 6:07:40 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 6:07:40 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 6:07:40 PM	R53713
Sulfate	38	1.0	2.5		mg/L	5	8/24/2018 6:07:40 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.37	0.00099	0.0020		mg/L	1	9/13/2018 12:47:03 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:47:03 PM	B54126
Calcium	140	0.39	5.0		mg/L	5	9/13/2018 12:49:00 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:47:03 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:47:03 PM	B54126
Iron	2.9	0.082	0.10	*	mg/L	5	9/13/2018 12:49:00 PM	B54126
Magnesium	41	0.25	1.0		mg/L	1	9/13/2018 12:47:03 PM	B54126
Manganese	2.9	0.0020	0.010	*	mg/L	5	9/13/2018 12:49:00 PM	B54126
Potassium	0.57	0.11	1.0	J	mg/L	1	9/13/2018 12:47:03 PM	B54126
Silver	0.0035	0.0018	0.0050	J	mg/L	1	9/13/2018 12:47:03 PM	B54126
Sodium	170	0.82	5.0		mg/L	5	9/13/2018 12:49:00 PM	B54126
Zinc	0.018	0.0021	0.010		mg/L	1	9/13/2018 12:47:03 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.2	0.0050	0.010		mg/L	5	9/13/2018 6:30:10 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:29:26 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:29:26 PM	40243
Copper	ND	0.0041	0.0060		mg/L	1	9/14/2018 5:26:28 PM	40243
Iron	5.6	0.10	0.20	*	mg/L	10	9/13/2018 6:32:08 PM	40243
Manganese	3.4	0.0055	0.010	*	mg/L	5	9/13/2018 6:30:10 PM	40243
Silver	0.0031	0.0012	0.0050	J	mg/L	1	9/13/2018 5:29:26 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0084	0.0033	0.010	J	mg/L	1	9/13/2018 5:29:26 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	8/29/2018 11:21:51 AM	B53782
Lead	0.00020	0.00017	0.00050	J	mg/L	1	8/29/2018 11:21:51 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:21:51 AM	B53782
Uranium	0.0029	0.000096	0.00050		mg/L	1	8/29/2018 11:21:51 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0027	0.00041	0.0010		mg/L	1	9/11/2018 6:19:56 PM	40243
Lead	0.0037	0.00023	0.00050		mg/L	1	9/11/2018 6:19:56 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:19:56 PM	40243
Uranium	0.0034	0.000068	0.00050		mg/L	1	9/11/2018 6:19:56 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000099	0.000038	0.00020	J	mg/L	1	9/14/2018 11:27:58 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Benzoic acid	7.1	6.3	20	J	µg/L	1	9/6/2018 9:31:45 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 9:31:45 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 9:31:45 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 9:31:45 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 9:31:45 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 9:31:45 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 9:31:45 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 9:31:45 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 9:31:45 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 9:31:45 PM	40042
Surr: 2-Fluorophenol	40.6	0	15-74.1		%Rec	1	9/6/2018 9:31:45 PM	40042
Surr: Phenol-d5	32.0	0	15-59.8		%Rec	1	9/6/2018 9:31:45 PM	40042
Surr: 2,4,6-Tribromophenol	59.8	0	22.1-112		%Rec	1	9/6/2018 9:31:45 PM	40042
Surr: Nitrobenzene-d5	56.4	0	33.2-94		%Rec	1	9/6/2018 9:31:45 PM	40042
Surr: 2-Fluorobiphenyl	57.2	0	34-90.9		%Rec	1	9/6/2018 9:31:45 PM	40042
Surr: 4-Terphenyl-d14	65.4	0	15-149		%Rec	1	9/6/2018 9:31:45 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11	0.17	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Toluene	ND	0.17	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Ethylbenzene	0.68	0.22	1.0	J	µg/L	1	8/28/2018 5:43:00 PM	R53749
Methyl tert-butyl ether (MTBE)	63	0.32	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Naphthalene	ND	0.29	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Acetone	ND	0.79	10		µg/L	1	8/28/2018 5:43:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 5:43:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 5:43:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Chlorobenzene	0.45	0.29	1.0	J	µg/L	1	8/28/2018 5:43:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 5:43:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,4-Dichlorobenzene	4.6	0.40	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1-Dichloroethane	0.74	0.40	1.0	J	µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 5:43:00 PM	R53749
Isopropylbenzene	0.28	0.22	1.0	J	µg/L	1	8/28/2018 5:43:00 PM	R53749
4-Isopropyltoluene	1.0	0.24	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 5:43:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
sec-Butylbenzene	1.4	0.20	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-35
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018 3:00:00 PM
Lab ID: 1808F55-004
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 5:43:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 5:43:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	8/28/2018 5:43:00 PM	R53749
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	8/28/2018 5:43:00 PM	R53749
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	8/28/2018 5:43:00 PM	R53749
Surr: Toluene-d8	96.9	0	70-130		%Rec	1	8/28/2018 5:43:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.068	0.0048	0.0093		µg/L	1	9/4/2018 2:46:03 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	4.0	0.63	1.0		mg/L	1	8/29/2018 1:28:57 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 1:28:57 PM	40036
Surr: DNOP	121	0	76.7-135		%Rec	1	8/29/2018 1:28:57 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	14	0.49	1.0		mg/L	20	8/29/2018 8:06:50 PM	G53798
Surr: BFB	125	0	69.3-150		%Rec	20	8/29/2018 8:06:50 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.45	0.15	0.50	J	mg/L	5	8/24/2018 6:32:29 PM	R53713
Chloride	130	0.59	10		mg/L	20	8/24/2018 6:44:54 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 6:32:29 PM	R53713
Bromide	0.59	0.13	0.50		mg/L	5	8/24/2018 6:32:29 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 6:32:29 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 6:32:29 PM	R53713
Sulfate	22	1.0	2.5		mg/L	5	8/24/2018 6:32:29 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.98	0.00099	0.0020		mg/L	1	9/13/2018 12:50:57 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:50:57 PM	B54126
Calcium	35	0.078	1.0		mg/L	1	9/13/2018 12:50:57 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:50:57 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:50:57 PM	B54126
Iron	1.1	0.082	0.10	*	mg/L	5	9/13/2018 12:52:53 PM	B54126
Magnesium	7.4	0.25	1.0		mg/L	1	9/13/2018 12:50:57 PM	B54126
Manganese	0.57	0.00039	0.0020	*	mg/L	1	9/13/2018 12:50:57 PM	B54126
Potassium	1.8	0.11	1.0		mg/L	1	9/13/2018 12:50:57 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 12:50:57 PM	B54126
Sodium	240	0.82	5.0		mg/L	5	9/13/2018 12:52:53 PM	B54126
Zinc	0.0082	0.0021	0.010	J	mg/L	1	9/13/2018 12:50:57 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.80	0.0010	0.0020		mg/L	1	9/13/2018 5:31:24 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:31:24 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:31:24 PM	40243
Copper	0.011	0.0041	0.0060		mg/L	1	9/14/2018 5:34:50 PM	40243
Iron	4.6	0.051	0.10	*	mg/L	5	9/18/2018 4:31:12 PM	40395
Manganese	0.47	0.0011	0.0020	*	mg/L	1	9/13/2018 5:31:24 PM	40243
Silver	0.0013	0.0012	0.0050	J	mg/L	1	9/13/2018 5:31:24 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.014	0.0033	0.010		mg/L	1	9/18/2018 4:29:20 PM	40395
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0024	0.00042	0.0010		mg/L	1	8/29/2018 11:24:16 AM	B53782
Lead	0.00098	0.00017	0.00050		mg/L	1	8/29/2018 11:24:16 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:24:16 AM	B53782
Uranium	0.018	0.000096	0.00050		mg/L	1	8/29/2018 11:24:16 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	9/11/2018 6:24:31 PM	40243
Lead	0.012	0.00023	0.00050		mg/L	1	9/11/2018 6:24:31 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:24:31 PM	40243
Uranium	0.020	0.000068	0.00050		mg/L	1	9/11/2018 6:24:31 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	9/14/2018 11:30:13 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzoic acid	ND	6.3	20		µg/L	1	9/6/2018 10:01:15 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/6/2018 10:01:15 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/6/2018 10:01:15 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/6/2018 10:01:15 PM	40042
1-Methylnaphthalene	50	7.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Methylnaphthalene	57	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/6/2018 10:01:15 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/6/2018 10:01:15 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Naphthalene	180	5.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/6/2018 10:01:15 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/6/2018 10:01:15 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Phenol	12	6.0	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/6/2018 10:01:15 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/6/2018 10:01:15 PM	40042
Surr: 2-Fluorophenol	32.4	0	15-74.1		%Rec	1	9/6/2018 10:01:15 PM	40042
Surr: Phenol-d5	28.1	0	15-59.8		%Rec	1	9/6/2018 10:01:15 PM	40042
Surr: 2,4,6-Tribromophenol	50.6	0	22.1-112		%Rec	1	9/6/2018 10:01:15 PM	40042
Surr: Nitrobenzene-d5	47.6	0	33.2-94		%Rec	1	9/6/2018 10:01:15 PM	40042
Surr: 2-Fluorobiphenyl	49.8	0	34-90.9		%Rec	1	9/6/2018 10:01:15 PM	40042
Surr: 4-Terphenyl-d14	43.2	0	15-149		%Rec	1	9/6/2018 10:01:15 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1300	17	100		µg/L	100	8/28/2018 6:08:00 PM	R53749
Toluene	15	1.7	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Ethylbenzene	35	2.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Methyl tert-butyl ether (MTBE)	36	3.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2,4-Trimethylbenzene	560	2.5	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,3,5-Trimethylbenzene	41	2.3	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2-Dichloroethane (EDC)	14	4.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Naphthalene	320	2.9	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
1-Methylnaphthalene	49	3.4	40		µg/L	10	8/28/2018 6:32:00 PM	R53749
2-Methylnaphthalene	60	2.4	40		µg/L	10	8/28/2018 6:32:00 PM	R53749
Acetone	36	7.9	100	J	µg/L	10	8/28/2018 6:32:00 PM	R53749
Bromobenzene	ND	3.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Bromodichloromethane	ND	2.8	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Bromoform	ND	3.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Bromomethane	ND	2.6	30		µg/L	10	8/28/2018 6:32:00 PM	R53749
2-Butanone	ND	13	100		µg/L	10	8/28/2018 6:32:00 PM	R53749
Carbon disulfide	ND	3.9	100		µg/L	10	8/28/2018 6:32:00 PM	R53749
Carbon Tetrachloride	ND	1.3	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Chlorobenzene	ND	2.9	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Chloroethane	ND	1.6	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
Chloroform	ND	4.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Chloromethane	ND	2.9	30		µg/L	10	8/28/2018 6:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	4.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
4-Chlorotoluene	ND	4.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
cis-1,2-DCE	ND	3.8	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
Dibromochloromethane	ND	2.4	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Dibromomethane	ND	3.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,4-Dichlorobenzene	8.3	4.0	10	J	µg/L	10	8/28/2018 6:32:00 PM	R53749
Dichlorodifluoromethane	ND	10	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1-Dichloroethane	23	4.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1-Dichloroethene	74	1.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2-Dichloropropane	ND	1.5	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,3-Dichloropropane	ND	2.7	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
2,2-Dichloropropane	ND	1.8	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1-Dichloropropene	ND	1.6	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Hexachlorobutadiene	ND	8.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
2-Hexanone	ND	9.1	100		µg/L	10	8/28/2018 6:32:00 PM	R53749
Isopropylbenzene	68	2.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
4-Isopropyltoluene	6.4	2.4	10	J	µg/L	10	8/28/2018 6:32:00 PM	R53749
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	8/28/2018 6:32:00 PM	R53749
Methylene Chloride	ND	2.1	30		µg/L	10	8/28/2018 6:32:00 PM	R53749
n-Butylbenzene	34	2.5	30		µg/L	10	8/28/2018 6:32:00 PM	R53749
n-Propylbenzene	93	2.4	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
sec-Butylbenzene	13	2.0	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Styrene	ND	2.5	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
tert-Butylbenzene	ND	2.2	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
trans-1,2-DCE	ND	1.8	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1,1-Trichloroethane	5.4	1.5	10	J	µg/L	10	8/28/2018 6:32:00 PM	R53749
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Trichloroethene (TCE)	200	2.6	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Trichlorofluoromethane	ND	1.7	10		µg/L	10	8/28/2018 6:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP05
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/23/2018
Lab ID: 1808F55-005
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	8/28/2018 6:32:00 PM	R53749
Vinyl chloride	ND	1.1	10		µg/L	10	8/28/2018 6:32:00 PM	R53749
Xylenes, Total	380	6.4	15		µg/L	10	8/28/2018 6:32:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	10	8/28/2018 6:32:00 PM	R53749
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	10	8/28/2018 6:32:00 PM	R53749
Surr: Dibromofluoromethane	103	0	70-130		%Rec	10	8/28/2018 6:32:00 PM	R53749
Surr: Toluene-d8	96.5	0	70-130		%Rec	10	8/28/2018 6:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0047	0.0092		µg/L	1	9/4/2018 3:01:07 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 1:53:53 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 1:53:53 PM	40036
Surr: DNOP	118	0	76.7-135		%Rec	1	8/29/2018 1:53:53 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 8:30:02 PM	G53798
Surr: BFB	89.2	0	69.3-150		%Rec	1	8/29/2018 8:30:02 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.32	0.15	0.50	J	mg/L	5	8/24/2018 7:22:08 PM	R53713
Chloride	220	0.59	10		mg/L	20	8/24/2018 7:34:32 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 7:22:08 PM	R53713
Bromide	1.2	0.13	0.50		mg/L	5	8/24/2018 7:22:08 PM	R53713
Nitrogen, Nitrate (As N)	8.1	0.033	0.50		mg/L	5	8/24/2018 7:22:08 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 7:22:08 PM	R53713
Sulfate	230	4.1	10		mg/L	20	8/24/2018 7:34:32 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.045	0.00099	0.0020		mg/L	1	9/13/2018 12:54:57 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 12:54:57 PM	B54126
Calcium	59	0.078	1.0		mg/L	1	9/13/2018 12:54:57 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 12:54:57 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 12:54:57 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 12:54:57 PM	B54126
Magnesium	14	0.25	1.0		mg/L	1	9/13/2018 12:54:57 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 12:54:57 PM	B54126
Potassium	1.4	0.11	1.0		mg/L	1	9/13/2018 12:54:57 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 12:54:57 PM	B54126
Sodium	400	0.82	5.0		mg/L	5	9/13/2018 12:57:03 PM	B54126
Zinc	0.0094	0.0021	0.010	J	mg/L	1	9/13/2018 12:54:57 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.060	0.0010	0.0020		mg/L	1	9/13/2018 5:33:17 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:33:17 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:33:17 PM	40243
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 5:33:17 PM	40243
Iron	0.83	0.010	0.020	*	mg/L	1	9/13/2018 5:33:17 PM	40243
Manganese	0.022	0.0011	0.0020		mg/L	1	9/13/2018 5:33:17 PM	40243
Silver	0.0022	0.0012	0.0050	J	mg/L	1	9/13/2018 5:33:17 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.012	0.0033	0.010		mg/L	1	9/18/2018 4:32:57 PM	40395
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	8/29/2018 11:26:38 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:26:38 AM	B53782
Selenium	0.0025	0.00076	0.0010		mg/L	1	8/29/2018 11:26:38 AM	B53782
Uranium	0.036	0.00048	0.0025	*	mg/L	5	8/29/2018 12:21:50 PM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0016	0.00041	0.0010		mg/L	1	9/11/2018 6:26:49 PM	40243
Lead	0.00073	0.00023	0.00050		mg/L	1	9/11/2018 6:26:49 PM	40243
Selenium	0.0024	0.00098	0.0010		mg/L	1	9/11/2018 6:26:49 PM	40243
Uranium	0.030	0.00034	0.0025		mg/L	5	9/12/2018 4:15:43 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.00040	0.000038	0.00020		mg/L	1	9/14/2018 11:32:29 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Benzoic acid	7.1	6.3	20	J	µg/L	1	9/7/2018 11:41:34 AM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 11:41:34 AM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 11:41:34 AM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 11:41:34 AM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 11:41:34 AM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 11:41:34 AM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 11:41:34 AM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 11:41:34 AM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Phenol	ND	6.0	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 11:41:34 AM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 11:41:34 AM	40042
Surr: 2-Fluorophenol	40.6	0	15-74.1		%Rec	1	9/7/2018 11:41:34 AM	40042
Surr: Phenol-d5	34.6	0	15-59.8		%Rec	1	9/7/2018 11:41:34 AM	40042
Surr: 2,4,6-Tribromophenol	65.8	0	22.1-112		%Rec	1	9/7/2018 11:41:34 AM	40042
Surr: Nitrobenzene-d5	58.2	0	33.2-94		%Rec	1	9/7/2018 11:41:34 AM	40042
Surr: 2-Fluorobiphenyl	57.6	0	34-90.9		%Rec	1	9/7/2018 11:41:34 AM	40042
Surr: 4-Terphenyl-d14	63.5	0	15-149		%Rec	1	9/7/2018 11:41:34 AM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.24	0.17	1.0	J	µg/L	1	8/28/2018 6:56:00 PM	R53749
Toluene	ND	0.17	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Methyl tert-butyl ether (MTBE)	0.87	0.32	1.0	J	µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Naphthalene	0.49	0.29	2.0	J	µg/L	1	8/28/2018 6:56:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Acetone	ND	0.79	10		µg/L	1	8/28/2018 6:56:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 6:56:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 6:56:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 6:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1-Dichloroethene	2.4	0.12	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 6:56:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 6:56:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Tetrachloroethene (PCE)	0.22	0.15	1.0	J	µg/L	1	8/28/2018 6:56:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Trichloroethene (TCE)	3.6	0.26	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-34
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 7:40:00 AM
Lab ID: 1808F55-006 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 6:56:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 6:56:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/28/2018 6:56:00 PM	R53749
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/28/2018 6:56:00 PM	R53749
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	8/28/2018 6:56:00 PM	R53749
Surr: Toluene-d8	96.4	0	70-130		%Rec	1	8/28/2018 6:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 2:18:32 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 2:18:32 PM	40036
Surr: DNOP	119	0	76.7-135		%Rec	1	8/29/2018 2:18:32 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	4.7	0.024	0.050		mg/L	1	8/29/2018 8:53:17 PM	G53798
Surr: BFB	156	0	69.3-150	S	%Rec	1	8/29/2018 8:53:17 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.55	0.15	0.50		mg/L	5	8/24/2018 7:46:57 PM	R53713
Chloride	110	0.59	10		mg/L	20	8/24/2018 7:59:22 PM	R53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 7:46:57 PM	R53713
Bromide	1.3	0.13	0.50		mg/L	5	8/24/2018 7:46:57 PM	R53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 7:46:57 PM	R53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 7:46:57 PM	R53713
Sulfate	160	1.0	2.5		mg/L	5	8/24/2018 7:46:57 PM	R53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.34	0.00099	0.0020		mg/L	1	9/13/2018 1:05:38 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:05:38 PM	B54126
Calcium	110	0.39	5.0		mg/L	5	9/13/2018 1:07:51 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:05:38 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:05:38 PM	B54126
Iron	0.39	0.016	0.020	*	mg/L	1	9/13/2018 1:05:38 PM	B54126
Magnesium	20	0.25	1.0		mg/L	1	9/13/2018 1:05:38 PM	B54126
Manganese	2.4	0.0020	0.010	*	mg/L	5	9/13/2018 1:07:51 PM	B54126
Potassium	0.71	0.11	1.0	J	mg/L	1	9/13/2018 1:05:38 PM	B54126
Silver	0.0024	0.0018	0.0050	J	mg/L	1	9/13/2018 1:05:38 PM	B54126
Sodium	270	0.82	5.0		mg/L	5	9/13/2018 1:07:51 PM	B54126
Zinc	0.0062	0.0021	0.010	J	mg/L	1	9/13/2018 1:05:38 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.42	0.0010	0.0020		mg/L	1	9/13/2018 5:35:14 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:35:14 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:35:14 PM	40243
Copper	0.0049	0.0041	0.0060	J	mg/L	1	9/13/2018 5:35:14 PM	40243
Iron	1.7	0.051	0.10	*	mg/L	5	9/13/2018 6:36:26 PM	40243
Manganese	2.4	0.0055	0.010	*	mg/L	5	9/13/2018 6:36:26 PM	40243
Silver	0.0029	0.0012	0.0050	J	mg/L	1	9/13/2018 5:35:14 PM	40243
Zinc	0.0042	0.0033	0.010	J	mg/L	1	9/13/2018 5:35:14 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0048	0.00042	0.0010		mg/L	1	8/29/2018 11:29:00 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:29:00 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:29:00 AM	B53782
Uranium	0.0061	0.000096	0.00050		mg/L	1	8/29/2018 11:29:00 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0070	0.00041	0.0010		mg/L	1	9/11/2018 6:29:06 PM	40243
Lead	0.00036	0.00023	0.00050	J	mg/L	1	9/11/2018 6:29:06 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:29:06 PM	40243
Uranium	0.0061	0.000068	0.00050		mg/L	1	9/11/2018 6:29:06 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000064	0.000038	0.00020	J	mg/L	1	9/14/2018 11:39:23 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzoic acid	ND	6.3	20		µg/L	1	9/7/2018 12:10:54 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 12:10:54 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 12:10:54 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 12:10:54 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 12:10:54 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 12:10:54 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 12:10:54 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 12:10:54 PM	40042
Surr: 2-Fluorophenol	39.5	0	15-74.1		%Rec	1	9/7/2018 12:10:54 PM	40042
Surr: Phenol-d5	35.7	0	15-59.8		%Rec	1	9/7/2018 12:10:54 PM	40042
Surr: 2,4,6-Tribromophenol	82.1	0	22.1-112		%Rec	1	9/7/2018 12:10:54 PM	40042
Surr: Nitrobenzene-d5	57.6	0	33.2-94		%Rec	1	9/7/2018 12:10:54 PM	40042
Surr: 2-Fluorobiphenyl	62.9	0	34-90.9		%Rec	1	9/7/2018 12:10:54 PM	40042
Surr: 4-Terphenyl-d14	57.5	0	15-149		%Rec	1	9/7/2018 12:10:54 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2.7	0.87	5.0	J	µg/L	5	8/28/2018 7:44:00 PM	R53749
Toluene	ND	0.84	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Ethylbenzene	120	1.1	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Methyl tert-butyl ether (MTBE)	5300	16	50		µg/L	50	8/28/2018 7:20:00 PM	R53749
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Naphthalene	ND	1.4	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
1-Methylnaphthalene	ND	1.7	20		µg/L	5	8/28/2018 7:44:00 PM	R53749
2-Methylnaphthalene	ND	1.2	20		µg/L	5	8/28/2018 7:44:00 PM	R53749
Acetone	ND	3.9	50		µg/L	5	8/28/2018 7:44:00 PM	R53749
Bromobenzene	ND	1.6	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Bromodichloromethane	ND	1.4	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Bromoform	ND	1.6	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Bromomethane	ND	1.3	15		µg/L	5	8/28/2018 7:44:00 PM	R53749
2-Butanone	ND	6.3	50		µg/L	5	8/28/2018 7:44:00 PM	R53749
Carbon disulfide	ND	1.9	50		µg/L	5	8/28/2018 7:44:00 PM	R53749
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Chlorobenzene	ND	1.5	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Chloroethane	ND	0.82	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
Chloroform	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Chloromethane	ND	1.5	15		µg/L	5	8/28/2018 7:44:00 PM	R53749
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
Dibromochloromethane	ND	1.2	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Dibromomethane	ND	1.6	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
2,2-Dichloropropane	ND	0.92	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
2-Hexanone	ND	4.5	50		µg/L	5	8/28/2018 7:44:00 PM	R53749
Isopropylbenzene	8.0	1.1	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	8/28/2018 7:44:00 PM	R53749
Methylene Chloride	ND	1.0	15		µg/L	5	8/28/2018 7:44:00 PM	R53749
n-Butylbenzene	ND	1.2	15		µg/L	5	8/28/2018 7:44:00 PM	R53749
n-Propylbenzene	14	1.2	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
sec-Butylbenzene	1.5	1.0	5.0	J	µg/L	5	8/28/2018 7:44:00 PM	R53749
Styrene	ND	1.3	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	8/28/2018 7:44:00 PM	R53749
Vinyl chloride	ND	0.55	5.0		µg/L	5	8/28/2018 7:44:00 PM	R53749
Xylenes, Total	ND	3.2	7.5		µg/L	5	8/28/2018 7:44:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-17
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:20:00 AM
Lab ID: 1808F55-007
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	5	8/28/2018 7:44:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.6	0	70-130		%Rec	5	8/28/2018 7:44:00 PM	R53749
Surr: Dibromofluoromethane	103	0	70-130		%Rec	5	8/28/2018 7:44:00 PM	R53749
Surr: Toluene-d8	95.8	0	70-130		%Rec	5	8/28/2018 7:44:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/4/2018 3:16:19 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.9	0.63	1.0		mg/L	1	8/29/2018 2:43:26 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 2:43:26 PM	40036
Surr: DNOP	119	0	76.7-135		%Rec	1	8/29/2018 2:43:26 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	22	0.49	1.0		mg/L	20	8/29/2018 9:39:43 PM	G53798
Surr: BFB	108	0	69.3-150		%Rec	20	8/29/2018 9:39:43 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.15	0.50		mg/L	5	8/24/2018 8:36:36 PM	A53713
Chloride	120	0.59	10		mg/L	20	8/24/2018 8:49:01 PM	A53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 8:36:36 PM	A53713
Bromide	1.3	0.13	0.50		mg/L	5	8/24/2018 8:36:36 PM	A53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 8:36:36 PM	A53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 8:36:36 PM	A53713
Sulfate	ND	1.0	2.5		mg/L	5	8/24/2018 8:36:36 PM	A53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	1.8	0.0049	0.010		mg/L	5	9/13/2018 1:11:48 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:09:50 PM	B54126
Calcium	150	0.39	5.0		mg/L	5	9/13/2018 1:11:48 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:09:50 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:09:50 PM	B54126
Iron	10	0.33	0.40	*	mg/L	20	9/13/2018 2:41:46 PM	B54126
Magnesium	30	0.25	1.0		mg/L	1	9/13/2018 1:09:50 PM	B54126
Manganese	2.3	0.0020	0.010	*	mg/L	5	9/13/2018 1:11:48 PM	B54126
Potassium	0.86	0.11	1.0	J	mg/L	1	9/13/2018 1:09:50 PM	B54126
Silver	0.0025	0.0018	0.0050	J	mg/L	1	9/13/2018 1:09:50 PM	B54126
Sodium	300	0.82	5.0		mg/L	5	9/13/2018 1:11:48 PM	B54126
Zinc	0.0097	0.0021	0.010	J	mg/L	1	9/13/2018 1:09:50 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	2.1	0.0050	0.010	*	mg/L	5	9/13/2018 6:45:01 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:37:12 PM	40243
Chromium	0.0019	0.0018	0.0060	J	mg/L	1	9/13/2018 5:37:12 PM	40243
Copper	0.0055	0.0041	0.0060	J	mg/L	1	9/14/2018 5:38:37 PM	40243
Iron	15	0.20	0.40	*	mg/L	20	9/13/2018 6:46:55 PM	40243
Manganese	2.4	0.0055	0.010	*	mg/L	5	9/13/2018 6:45:01 PM	40243
Silver	0.0029	0.0012	0.0050	J	mg/L	1	9/13/2018 5:37:12 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.033	0.0033	0.010		mg/L	1	9/18/2018 4:37:00 PM	40395
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.014	0.00042	0.0010	*	mg/L	1	8/29/2018 11:31:23 AM	B53782
Lead	0.0016	0.00017	0.00050		mg/L	1	8/29/2018 11:31:23 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:31:23 AM	B53782
Uranium	0.00075	0.000096	0.00050		mg/L	1	8/29/2018 11:31:23 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.014	0.00041	0.0010	*	mg/L	1	9/11/2018 6:36:00 PM	40243
Lead	0.016	0.00023	0.00050	*	mg/L	1	9/11/2018 6:36:00 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:36:00 PM	40243
Uranium	0.0034	0.000068	0.00050		mg/L	1	9/11/2018 6:36:00 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000088	0.000038	0.00020	J	mg/L	1	9/14/2018 11:41:40 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzoic acid	ND	6.3	20		µg/L	1	9/7/2018 12:40:17 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 12:40:17 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Carbazole	7.8	6.3	10	J	µg/L	1	9/7/2018 12:40:17 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 12:40:17 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4-Dimethylphenol	7.4	5.9	10	J	µg/L	1	9/7/2018 12:40:17 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 12:40:17 PM	40042
1-Methylnaphthalene	140	7.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2-Methylnaphthalene	230	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 12:40:17 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 12:40:17 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Naphthalene	310	10	20		µg/L	2	9/10/2018 8:56:28 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 12:40:17 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 12:40:17 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Phenol	15	6.0	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 12:40:17 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 12:40:17 PM	40042
Surr: 2-Fluorophenol	29.2	0	15-74.1		%Rec	1	9/7/2018 12:40:17 PM	40042
Surr: Phenol-d5	40.1	0	15-59.8		%Rec	1	9/7/2018 12:40:17 PM	40042
Surr: 2,4,6-Tribromophenol	71.9	0	22.1-112		%Rec	1	9/7/2018 12:40:17 PM	40042
Surr: Nitrobenzene-d5	58.0	0	33.2-94		%Rec	1	9/7/2018 12:40:17 PM	40042
Surr: 2-Fluorobiphenyl	66.9	0	34-90.9		%Rec	1	9/7/2018 12:40:17 PM	40042
Surr: 4-Terphenyl-d14	57.9	0	15-149		%Rec	1	9/7/2018 12:40:17 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1700	3.5	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Toluene	4.3	3.4	20	J	µg/L	20	8/28/2018 8:32:00 PM	R53749
Ethylbenzene	710	4.5	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Methyl tert-butyl ether (MTBE)	9700	64	200		µg/L	200	8/28/2018 8:08:00 PM	R53749
1,2,4-Trimethylbenzene	720	5.1	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,3,5-Trimethylbenzene	110	4.6	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Naphthalene	520	5.8	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
1-Methylnaphthalene	210	6.7	80		µg/L	20	8/28/2018 8:32:00 PM	R53749
2-Methylnaphthalene	290	4.8	80		µg/L	20	8/28/2018 8:32:00 PM	R53749
Acetone	ND	16	200		µg/L	20	8/28/2018 8:32:00 PM	R53749
Bromobenzene	ND	6.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Bromodichloromethane	ND	5.7	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Bromoform	ND	6.5	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Bromomethane	ND	5.1	60		µg/L	20	8/28/2018 8:32:00 PM	R53749
2-Butanone	ND	25	200		µg/L	20	8/28/2018 8:32:00 PM	R53749
Carbon disulfide	ND	7.7	200		µg/L	20	8/28/2018 8:32:00 PM	R53749
Carbon Tetrachloride	ND	2.7	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Chlorobenzene	ND	5.8	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Chloroethane	ND	3.3	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
Chloroform	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Chloromethane	ND	5.9	60		µg/L	20	8/28/2018 8:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
4-Chlorotoluene	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
cis-1,2-DCE	ND	7.5	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
Dibromochloromethane	ND	4.7	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Dibromomethane	ND	6.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Dichlorodifluoromethane	ND	20	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1-Dichloroethane	ND	8.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1-Dichloroethene	ND	2.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2-Dichloropropane	ND	3.1	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,3-Dichloropropane	ND	5.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
2,2-Dichloropropane	ND	3.7	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1-Dichloropropene	ND	3.2	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Hexachlorobutadiene	ND	16	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
2-Hexanone	ND	18	200		µg/L	20	8/28/2018 8:32:00 PM	R53749
Isopropylbenzene	34	4.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
4-Isopropyltoluene	6.4	4.8	20	J	µg/L	20	8/28/2018 8:32:00 PM	R53749
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	8/28/2018 8:32:00 PM	R53749
Methylene Chloride	ND	4.1	60		µg/L	20	8/28/2018 8:32:00 PM	R53749
n-Butylbenzene	16	5.0	60	J	µg/L	20	8/28/2018 8:32:00 PM	R53749
n-Propylbenzene	99	4.9	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
sec-Butylbenzene	7.7	4.0	20	J	µg/L	20	8/28/2018 8:32:00 PM	R53749
Styrene	ND	5.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
tert-Butylbenzene	ND	4.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
trans-1,2-DCE	ND	3.7	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Trichlorofluoromethane	ND	3.4	20		µg/L	20	8/28/2018 8:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 8:55:00 AM
Lab ID: 1808F55-008
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	11	40		µg/L	20	8/28/2018 8:32:00 PM	R53749
Vinyl chloride	ND	2.2	20		µg/L	20	8/28/2018 8:32:00 PM	R53749
Xylenes, Total	740	13	30		µg/L	20	8/28/2018 8:32:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	20	8/28/2018 8:32:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.3	0	70-130		%Rec	20	8/28/2018 8:32:00 PM	R53749
Surr: Dibromofluoromethane	100	0	70-130		%Rec	20	8/28/2018 8:32:00 PM	R53749
Surr: Toluene-d8	98.3	0	70-130		%Rec	20	8/28/2018 8:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 3:46:42 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 3:08:06 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 3:08:06 PM	40036
Surr: DNOP	123	0	76.7-135		%Rec	1	8/29/2018 3:08:06 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 10:03:06 PM	G53798
Surr: BFB	92.4	0	69.3-150		%Rec	1	8/29/2018 10:03:06 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 9:01:26 PM	A53713
Chloride	ND	0.029	0.50		mg/L	1	8/24/2018 9:01:26 PM	A53713
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/24/2018 9:01:26 PM	A53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 9:01:26 PM	A53713
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	8/24/2018 9:01:26 PM	A53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/24/2018 9:01:26 PM	A53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 9:01:26 PM	A53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/13/2018 1:13:46 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:13:46 PM	B54126
Calcium	ND	0.078	1.0		mg/L	1	9/13/2018 1:13:46 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:13:46 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:13:46 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 1:13:46 PM	B54126
Magnesium	ND	0.25	1.0		mg/L	1	9/13/2018 1:13:46 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 1:13:46 PM	B54126
Potassium	ND	0.11	1.0		mg/L	1	9/13/2018 1:13:46 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 1:13:46 PM	B54126
Sodium	ND	0.16	1.0		mg/L	1	9/13/2018 1:13:46 PM	B54126
Zinc	0.0069	0.0021	0.010	J	mg/L	1	9/13/2018 1:13:46 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 5:39:11 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:39:11 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:39:11 PM	40243
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 5:39:11 PM	40243
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 5:39:11 PM	40243
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 5:39:11 PM	40243
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 5:39:11 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 5:39:11 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/29/2018 11:33:47 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:33:47 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:33:47 AM	B53782
Uranium	ND	0.000096	0.00050		mg/L	1	8/29/2018 11:33:47 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/11/2018 6:38:17 PM	40243
Lead	ND	0.00023	0.00050		mg/L	1	9/11/2018 6:38:17 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:38:17 PM	40243
Uranium	ND	0.000068	0.00050		mg/L	1	9/11/2018 6:38:17 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000063	0.000038	0.00020	J	mg/L	1	9/14/2018 11:43:57 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Benzoic acid	6.7	6.3	20	J	µg/L	1	9/7/2018 1:09:38 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 1:09:38 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 1:09:38 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 1:09:38 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 1:09:38 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 1:09:38 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 1:09:38 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 1:09:38 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 1:09:38 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 1:09:38 PM	40042
Surr: 2-Fluorophenol	49.8	0	15-74.1		%Rec	1	9/7/2018 1:09:38 PM	40042
Surr: Phenol-d5	40.6	0	15-59.8		%Rec	1	9/7/2018 1:09:38 PM	40042
Surr: 2,4,6-Tribromophenol	69.5	0	22.1-112		%Rec	1	9/7/2018 1:09:38 PM	40042
Surr: Nitrobenzene-d5	69.0	0	33.2-94		%Rec	1	9/7/2018 1:09:38 PM	40042
Surr: 2-Fluorobiphenyl	65.1	0	34-90.9		%Rec	1	9/7/2018 1:09:38 PM	40042
Surr: 4-Terphenyl-d14	49.5	0	15-149		%Rec	1	9/7/2018 1:09:38 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Toluene	ND	0.17	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Naphthalene	0.42	0.29	2.0	J	µg/L	1	8/28/2018 8:56:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
2-Methylnaphthalene	0.46	0.24	4.0	J	µg/L	1	8/28/2018 8:56:00 PM	R53749
Acetone	7.4	0.79	10	J	µg/L	1	8/28/2018 8:56:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 8:56:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 8:56:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 8:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 8:56:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 8:56:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:40:00 AM
Lab ID: 1808F55-009
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 8:56:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 8:56:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/28/2018 8:56:00 PM	R53749
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/28/2018 8:56:00 PM	R53749
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	8/28/2018 8:56:00 PM	R53749
Surr: Toluene-d8	94.8	0	70-130		%Rec	1	8/28/2018 8:56:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/4/2018 4:01:54 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 3:32:56 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 3:32:56 PM	40036
Surr: DNOP	118	0	76.7-135		%Rec	1	8/29/2018 3:32:56 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 10:26:28 PM	G53798
Surr: BFB	90.6	0	69.3-150		%Rec	1	8/29/2018 10:26:28 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/24/2018 10:15:58 PM	A53713
Chloride	0.13	0.029	0.50	J	mg/L	1	8/24/2018 10:15:58 PM	A53713
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/24/2018 10:15:58 PM	A53713
Bromide	ND	0.027	0.10		mg/L	1	8/24/2018 10:15:58 PM	A53713
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	8/24/2018 10:15:58 PM	A53713
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/24/2018 10:15:58 PM	A53713
Sulfate	ND	0.21	0.50		mg/L	1	8/24/2018 10:15:58 PM	A53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	ND	0.00099	0.0020		mg/L	1	9/13/2018 1:20:07 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:20:07 PM	B54126
Calcium	ND	0.078	1.0		mg/L	1	9/13/2018 1:20:07 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:20:07 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:20:07 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 1:20:07 PM	B54126
Magnesium	ND	0.25	1.0		mg/L	1	9/13/2018 1:20:07 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 1:20:07 PM	B54126
Potassium	ND	0.11	1.0		mg/L	1	9/13/2018 1:20:07 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 1:20:07 PM	B54126
Sodium	0.23	0.16	1.0	J	mg/L	1	9/13/2018 1:20:07 PM	B54126
Zinc	0.0086	0.0021	0.010	J	mg/L	1	9/13/2018 1:20:07 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 5:41:22 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:41:22 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:41:22 PM	40243
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 5:41:22 PM	40243
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 5:41:22 PM	40243
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 5:41:22 PM	40243
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 5:41:22 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 5:41:22 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	8/29/2018 11:36:12 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:36:12 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:36:12 AM	B53782
Uranium	ND	0.000096	0.00050		mg/L	1	8/29/2018 11:36:12 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/11/2018 6:40:34 PM	40243
Lead	ND	0.00023	0.00050		mg/L	1	9/11/2018 6:40:34 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:40:34 PM	40243
Uranium	ND	0.000068	0.00050		mg/L	1	9/11/2018 6:40:34 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000059	0.000038	0.00020	J	mg/L	1	9/14/2018 11:46:15 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Benzoic acid	6.4	6.3	20	J	µg/L	1	9/7/2018 1:39:04 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 1:39:04 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 1:39:04 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 1:39:04 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 1:39:04 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 1:39:04 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 1:39:04 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 1:39:04 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 1:39:04 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 1:39:04 PM	40042
Surr: 2-Fluorophenol	41.3	0	15-74.1		%Rec	1	9/7/2018 1:39:04 PM	40042
Surr: Phenol-d5	36.1	0	15-59.8		%Rec	1	9/7/2018 1:39:04 PM	40042
Surr: 2,4,6-Tribromophenol	65.0	0	22.1-112		%Rec	1	9/7/2018 1:39:04 PM	40042
Surr: Nitrobenzene-d5	65.8	0	33.2-94		%Rec	1	9/7/2018 1:39:04 PM	40042
Surr: 2-Fluorobiphenyl	66.5	0	34-90.9		%Rec	1	9/7/2018 1:39:04 PM	40042
Surr: 4-Terphenyl-d14	48.4	0	15-149		%Rec	1	9/7/2018 1:39:04 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Toluene	ND	0.17	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Naphthalene	ND	0.29	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Acetone	4.2	0.79	10	J	µg/L	1	8/28/2018 9:20:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 9:20:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 9:20:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 9:20:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 9:20:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 9:20:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 9:55:00 AM
Lab ID: 1808F55-010
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 9:20:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 9:20:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	8/28/2018 9:20:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	8/28/2018 9:20:00 PM	R53749
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	8/28/2018 9:20:00 PM	R53749
Surr: Toluene-d8	96.4	0	70-130		%Rec	1	8/28/2018 9:20:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0047	0.0092		µg/L	1	9/4/2018 4:17:02 PM	40109
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.6	0.63	1.0		mg/L	1	8/29/2018 4:22:32 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 4:22:32 PM	40036
Surr: DNOP	120	0	76.7-135		%Rec	1	8/29/2018 4:22:32 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.97	0.024	0.050		mg/L	1	8/29/2018 10:49:41 PM	G53798
Surr: BFB	111	0	69.3-150		%Rec	1	8/29/2018 10:49:41 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.51	0.15	0.50		mg/L	5	8/24/2018 10:40:48 PM	A53713
Chloride	230	0.59	10		mg/L	20	8/24/2018 10:53:12 PM	A53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 10:40:48 PM	A53713
Bromide	1.1	0.13	0.50		mg/L	5	8/24/2018 10:40:48 PM	A53713
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/24/2018 10:40:48 PM	A53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 10:40:48 PM	A53713
Sulfate	ND	1.0	2.5		mg/L	5	8/24/2018 10:40:48 PM	A53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	2.1	0.0049	0.010	*	mg/L	5	9/13/2018 1:24:19 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:22:20 PM	B54126
Calcium	94	0.078	1.0		mg/L	1	9/13/2018 1:22:20 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:22:20 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:22:20 PM	B54126
Iron	0.68	0.016	0.020	*	mg/L	1	9/13/2018 1:22:20 PM	B54126
Magnesium	25	0.25	1.0		mg/L	1	9/13/2018 1:22:20 PM	B54126
Manganese	2.2	0.0020	0.010	*	mg/L	5	9/13/2018 1:24:19 PM	B54126
Potassium	0.49	0.11	1.0	J	mg/L	1	9/13/2018 1:22:20 PM	B54126
Silver	0.0027	0.0018	0.0050	J	mg/L	1	9/13/2018 1:22:20 PM	B54126
Sodium	290	0.82	5.0		mg/L	5	9/13/2018 1:24:19 PM	B54126
Zinc	0.0081	0.0021	0.010	J	mg/L	1	9/13/2018 1:22:20 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	2.0	0.0050	0.010	*	mg/L	5	9/13/2018 6:48:51 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:43:33 PM	40243
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 5:43:33 PM	40243
Copper	0.0044	0.0041	0.0060	J	mg/L	1	9/13/2018 5:43:33 PM	40243
Iron	2.9	0.051	0.10	*	mg/L	5	9/13/2018 6:48:51 PM	40243
Manganese	2.2	0.0055	0.010	*	mg/L	5	9/13/2018 6:48:51 PM	40243
Silver	0.0028	0.0012	0.0050	J	mg/L	1	9/13/2018 5:43:33 PM	40243

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0034	0.0033	0.010	J	mg/L	1	9/13/2018 5:43:33 PM	40243
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0016	0.00042	0.0010		mg/L	1	8/29/2018 11:43:24 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:43:24 AM	B53782
Selenium	ND	0.00076	0.0010		mg/L	1	8/29/2018 11:43:24 AM	B53782
Uranium	0.00060	0.000096	0.00050		mg/L	1	8/29/2018 11:43:24 AM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0024	0.00041	0.0010		mg/L	1	9/11/2018 6:42:51 PM	40243
Lead	0.00042	0.00023	0.00050	J	mg/L	1	9/11/2018 6:42:51 PM	40243
Selenium	ND	0.00098	0.0010		mg/L	1	9/11/2018 6:42:51 PM	40243
Uranium	0.00064	0.000068	0.00050		mg/L	1	9/11/2018 6:42:51 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000082	0.000038	0.00020	J	mg/L	1	9/14/2018 11:48:33 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Benzoic acid	12	6.3	20	J	µg/L	1	9/7/2018 2:08:32 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 2:08:32 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 2:08:32 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 2:08:32 PM	40042
1-Methylnaphthalene	80	7.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Methylnaphthalene	25	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 2:08:32 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 2:08:32 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Naphthalene	20	5.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 2:08:32 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 2:08:32 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Phenol	ND	6.0	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 2:08:32 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 2:08:32 PM	40042
Surr: 2-Fluorophenol	49.4	0	15-74.1		%Rec	1	9/7/2018 2:08:32 PM	40042
Surr: Phenol-d5	41.4	0	15-59.8		%Rec	1	9/7/2018 2:08:32 PM	40042
Surr: 2,4,6-Tribromophenol	66.9	0	22.1-112		%Rec	1	9/7/2018 2:08:32 PM	40042
Surr: Nitrobenzene-d5	67.5	0	33.2-94		%Rec	1	9/7/2018 2:08:32 PM	40042
Surr: 2-Fluorobiphenyl	67.9	0	34-90.9		%Rec	1	9/7/2018 2:08:32 PM	40042
Surr: 4-Terphenyl-d14	53.0	0	15-149		%Rec	1	9/7/2018 2:08:32 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	190	0.35	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Toluene	ND	0.34	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Ethylbenzene	11	0.45	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Methyl tert-butyl ether (MTBE)	110	0.64	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Naphthalene	27	0.58	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1-Methylnaphthalene	120	0.67	8.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
2-Methylnaphthalene	36	0.48	8.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Acetone	ND	1.6	20		µg/L	2	8/28/2018 9:45:00 PM	R53749
Bromobenzene	ND	0.64	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Bromodichloromethane	ND	0.57	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Bromoform	ND	0.65	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Bromomethane	ND	0.51	6.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
2-Butanone	ND	2.5	20		µg/L	2	8/28/2018 9:45:00 PM	R53749
Carbon disulfide	ND	0.77	20		µg/L	2	8/28/2018 9:45:00 PM	R53749
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Chlorobenzene	ND	0.58	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Chloroethane	ND	0.33	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Chloroform	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Chloromethane	ND	0.59	6.0		µg/L	2	8/28/2018 9:45:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011 **Matrix:** AQUEOUS **Received Date:** 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
cis-1,2-DCE	2.0	0.75	2.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Dibromochloromethane	ND	0.47	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Dibromomethane	ND	0.64	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1-Dichloroethene	0.39	0.24	2.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2-Dichloropropane	ND	0.31	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
2,2-Dichloropropane	ND	0.37	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1-Dichloropropene	ND	0.32	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
2-Hexanone	ND	1.8	20		µg/L	2	8/28/2018 9:45:00 PM	R53749
Isopropylbenzene	1.7	0.44	2.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	8/28/2018 9:45:00 PM	R53749
Methylene Chloride	ND	0.41	6.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
n-Butylbenzene	0.74	0.50	6.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
n-Propylbenzene	1.9	0.49	2.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
sec-Butylbenzene	0.69	0.40	2.0	J	µg/L	2	8/28/2018 9:45:00 PM	R53749
Styrene	ND	0.50	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1,1-Trichloroethane	ND	0.31	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Trichlorofluoromethane	ND	0.34	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-18
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018 10:25:00 AM
Lab ID: 1808F55-011
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Vinyl chloride	ND	0.22	2.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Xylenes, Total	ND	1.3	3.0		µg/L	2	8/28/2018 9:45:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	2	8/28/2018 9:45:00 PM	R53749
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	2	8/28/2018 9:45:00 PM	R53749
Surr: Dibromofluoromethane	99.9	0	70-130		%Rec	2	8/28/2018 9:45:00 PM	R53749
Surr: Toluene-d8	97.0	0	70-130		%Rec	2	8/28/2018 9:45:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	8/29/2018 4:47:17 PM	40036
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	8/29/2018 4:47:17 PM	40036
Surr: DNOP	120	0	76.7-135		%Rec	1	8/29/2018 4:47:17 PM	40036
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 11:36:09 PM	G53798
Surr: BFB	90.4	0	69.3-150		%Rec	1	8/29/2018 11:36:09 PM	G53798
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.35	0.15	0.50	J	mg/L	5	8/24/2018 11:05:37 PM	A53713
Chloride	240	0.59	10		mg/L	20	8/24/2018 11:18:02 PM	A53713
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/24/2018 11:05:37 PM	A53713
Bromide	1.3	0.13	0.50		mg/L	5	8/24/2018 11:05:37 PM	A53713
Nitrogen, Nitrate (As N)	8.1	0.033	0.50		mg/L	5	8/24/2018 11:05:37 PM	A53713
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/24/2018 11:05:37 PM	A53713
Sulfate	210	4.1	10		mg/L	20	8/24/2018 11:18:02 PM	A53713
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.045	0.00099	0.0020		mg/L	1	9/13/2018 1:32:55 PM	B54126
Cadmium	ND	0.0010	0.0020		mg/L	1	9/13/2018 1:32:55 PM	B54126
Calcium	59	0.078	1.0		mg/L	1	9/13/2018 1:32:55 PM	B54126
Chromium	ND	0.0013	0.0060		mg/L	1	9/13/2018 1:32:55 PM	B54126
Copper	ND	0.0032	0.0060		mg/L	1	9/13/2018 1:32:55 PM	B54126
Iron	ND	0.016	0.020		mg/L	1	9/13/2018 1:32:55 PM	B54126
Magnesium	14	0.25	1.0		mg/L	1	9/13/2018 1:32:55 PM	B54126
Manganese	ND	0.00039	0.0020		mg/L	1	9/13/2018 1:32:55 PM	B54126
Potassium	1.4	0.11	1.0		mg/L	1	9/13/2018 1:32:55 PM	B54126
Silver	ND	0.0018	0.0050		mg/L	1	9/13/2018 1:32:55 PM	B54126
Sodium	400	0.82	5.0		mg/L	5	9/13/2018 1:35:05 PM	B54126
Zinc	0.014	0.0021	0.010		mg/L	1	9/13/2018 1:32:55 PM	B54126
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.087	0.0010	0.0020		mg/L	1	9/13/2018 5:52:07 PM	40243
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:52:07 PM	40243
Chromium	0.0019	0.0018	0.0060	J	mg/L	1	9/13/2018 5:52:07 PM	40243
Copper	0.0046	0.0041	0.0060	J	mg/L	1	9/13/2018 5:52:07 PM	40243
Iron	2.5	0.051	0.10	*	mg/L	5	9/13/2018 6:50:49 PM	40243
Manganese	0.053	0.0011	0.0020	*	mg/L	1	9/13/2018 5:52:07 PM	40243
Silver	0.0015	0.0012	0.0050	J	mg/L	1	9/13/2018 5:52:07 PM	40243
Zinc	0.023	0.0033	0.010		mg/L	1	9/18/2018 4:40:50 PM	40395
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	8/29/2018 11:45:47 AM	B53782
Lead	ND	0.00017	0.00050		mg/L	1	8/29/2018 11:45:47 AM	B53782
Selenium	0.0025	0.00076	0.0010		mg/L	1	8/29/2018 11:45:47 AM	B53782
Uranium	0.036	0.00048	0.0025	*	mg/L	5	8/29/2018 12:24:15 PM	B53782
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	9/11/2018 6:45:08 PM	40243
Lead	0.0021	0.00023	0.00050		mg/L	1	9/11/2018 6:45:08 PM	40243
Selenium	0.0027	0.00098	0.0010		mg/L	1	9/11/2018 6:45:08 PM	40243
Uranium	0.029	0.00034	0.0025		mg/L	5	9/12/2018 4:18:46 PM	40243
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.00019	0.000038	0.00020	J	mg/L	1	9/14/2018 11:50:52 AM	40340
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Acenaphthylene	ND	6.2	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Aniline	ND	6.2	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Anthracene	ND	5.7	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Azobenzene	ND	6.7	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/7/2018 2:38:03 PM	40042
Benzyl alcohol	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Carbazole	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Chloroaniline	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Chlorophenol	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Chrysene	ND	6.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Dibenzofuran	ND	6.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Diethyl phthalate	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Fluoranthene	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Fluorene	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Hexachloroethane	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Isophorone	ND	6.2	10		µg/L	1	9/7/2018 2:38:03 PM	40042
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Methylphenol	ND	6.3	10		µg/L	1	9/7/2018 2:38:03 PM	40042
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/7/2018 2:38:03 PM	40042
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Naphthalene	ND	5.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Nitroaniline	ND	5.9	10		µg/L	1	9/7/2018 2:38:03 PM	40042
3-Nitroaniline	ND	6.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Nitroaniline	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Nitrobenzene	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2-Nitrophenol	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
4-Nitrophenol	ND	5.6	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Pentachlorophenol	ND	5.3	20		µg/L	1	9/7/2018 2:38:03 PM	40042
Phenanthrene	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Pyrene	ND	6.5	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Pyridine	ND	5.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/7/2018 2:38:03 PM	40042
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/7/2018 2:38:03 PM	40042
Surr: 2-Fluorophenol	31.9	0	15-74.1		%Rec	1	9/7/2018 2:38:03 PM	40042
Surr: Phenol-d5	27.0	0	15-59.8		%Rec	1	9/7/2018 2:38:03 PM	40042
Surr: 2,4,6-Tribromophenol	48.6	0	22.1-112		%Rec	1	9/7/2018 2:38:03 PM	40042
Surr: Nitrobenzene-d5	46.5	0	33.2-94		%Rec	1	9/7/2018 2:38:03 PM	40042
Surr: 2-Fluorobiphenyl	44.9	0	34-90.9		%Rec	1	9/7/2018 2:38:03 PM	40042
Surr: 4-Terphenyl-d14	38.6	0	15-149		%Rec	1	9/7/2018 2:38:03 PM	40042
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.35	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Toluene	ND	0.34	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Ethylbenzene	ND	0.45	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Methyl tert-butyl ether (MTBE)	0.99	0.64	2.0	J	µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Naphthalene	ND	0.58	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1-Methylnaphthalene	2.1	0.67	8.0	J	µg/L	2	8/28/2018 10:08:00 PM	R53749
2-Methylnaphthalene	0.93	0.48	8.0	J	µg/L	2	8/28/2018 10:08:00 PM	R53749
Acetone	ND	1.6	20		µg/L	2	8/28/2018 10:08:00 PM	R53749
Bromobenzene	ND	0.64	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Bromodichloromethane	ND	0.57	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Bromoform	ND	0.65	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Bromomethane	ND	0.51	6.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
2-Butanone	ND	2.5	20		µg/L	2	8/28/2018 10:08:00 PM	R53749
Carbon disulfide	ND	0.77	20		µg/L	2	8/28/2018 10:08:00 PM	R53749
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Chlorobenzene	ND	0.58	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Chloroethane	ND	0.33	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Chloroform	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Chloromethane	ND	0.59	6.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Dibromochloromethane	ND	0.47	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Dibromomethane	ND	0.64	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1-Dichloroethene	2.2	0.24	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2-Dichloropropane	ND	0.31	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
2,2-Dichloropropane	ND	0.37	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1-Dichloropropene	ND	0.32	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
2-Hexanone	ND	1.8	20		µg/L	2	8/28/2018 10:08:00 PM	R53749
Isopropylbenzene	ND	0.44	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	8/28/2018 10:08:00 PM	R53749
Methylene Chloride	ND	0.41	6.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
n-Butylbenzene	ND	0.50	6.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
n-Propylbenzene	ND	0.49	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
sec-Butylbenzene	ND	0.40	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Styrene	ND	0.50	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1,1-Trichloroethane	ND	0.31	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Trichloroethene (TCE)	3.4	0.52	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Trichlorofluoromethane	ND	0.34	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Vinyl chloride	ND	0.22	2.0		µg/L	2	8/28/2018 10:08:00 PM	R53749
Xylenes, Total	ND	1.3	3.0		µg/L	2	8/28/2018 10:08:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP06
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/24/2018
Lab ID: 1808F55-012
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	2	8/28/2018 10:08:00 PM	R53749
Surr: 4-Bromofluorobenzene	99.9	0	70-130		%Rec	2	8/28/2018 10:08:00 PM	R53749
Surr: Dibromofluoromethane	103	0	70-130		%Rec	2	8/28/2018 10:08:00 PM	R53749
Surr: Toluene-d8	93.6	0	70-130		%Rec	2	8/28/2018 10:08:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808F55-013
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/29/2018 11:59:31 PM	G53798
Surr: BFB	91.5	0	69.3-150		%Rec	1	8/29/2018 11:59:31 PM	G53798
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Toluene	ND	0.17	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Ethylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Naphthalene	ND	0.29	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Acetone	ND	0.79	10		µg/L	1	8/28/2018 10:32:00 PM	R53749
Bromobenzene	ND	0.32	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Bromodichloromethane	ND	0.28	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Bromoform	ND	0.32	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Bromomethane	ND	0.26	3.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
2-Butanone	ND	1.3	10		µg/L	1	8/28/2018 10:32:00 PM	R53749
Carbon disulfide	ND	0.39	10		µg/L	1	8/28/2018 10:32:00 PM	R53749
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Chlorobenzene	ND	0.29	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Chloroethane	ND	0.16	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Chloroform	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Chloromethane	ND	0.29	3.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Dibromochloromethane	ND	0.24	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Dibromomethane	ND	0.32	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808F55-013
Matrix: AQUEOUS
Received Date: 8/24/2018 1:45:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
2-Hexanone	ND	0.91	10		µg/L	1	8/28/2018 10:32:00 PM	R53749
Isopropylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	8/28/2018 10:32:00 PM	R53749
Methylene Chloride	ND	0.21	3.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
n-Propylbenzene	ND	0.24	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Styrene	ND	0.25	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Vinyl chloride	ND	0.11	1.0		µg/L	1	8/28/2018 10:32:00 PM	R53749
Xylenes, Total	ND	0.64	1.5		µg/L	1	8/28/2018 10:32:00 PM	R53749
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	8/28/2018 10:32:00 PM	R53749
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	8/28/2018 10:32:00 PM	R53749
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	8/28/2018 10:32:00 PM	R53749
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	8/28/2018 10:32:00 PM	R53749

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	120	50	150			
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Calcium	0.52	1.0	0.5000	0	103	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.8	50	150			J
Copper	0.0061	0.0060	0.006000	0	101	50	150			
Iron	0.017	0.020	0.02000	0	83.4	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.53	1.0	0.5000	0	106	50	150			J
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Sodium	0.50	1.0	0.5000	0	99.7	50	150			J
Zinc	0.0059	0.010	0.005000	0	118	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	85	115			
Cadmium	0.52	0.0020	0.5000	0	104	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Chromium	0.49	0.0060	0.5000	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.8	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.48	0.0020	0.5000	0	95.8	85	115			
Potassium	50	1.0	50.00	0	99.9	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Sodium	51	1.0	50.00	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Sample ID **1808F55-002GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB05**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Calcium	49	1.0	50.00	0	99.0	70	130			
Chromium	0.48	0.0060	0.5000	0	95.3	70	130			
Copper	0.48	0.0060	0.5000	0	96.4	70	130			
Iron	0.50	0.020	0.5000	0	100	70	130			
Magnesium	50	1.0	50.00	0	99.4	70	130			
Manganese	0.47	0.0020	0.5000	0	94.8	70	130			
Potassium	49	1.0	50.00	0	97.3	70	130			
Silver	0.11	0.0050	0.1000	0	106	70	130			
Sodium	50	1.0	50.00	0	101	70	130			
Zinc	0.50	0.010	0.5000	0.01130	97.2	70	130			

Sample ID **1808F55-002GMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB05**	Batch ID: **B54126**	RunNo: **54126**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1789411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	70	130	1.93	20	
Cadmium	0.53	0.0020	0.5000	0	105	70	130	1.80	20	
Calcium	51	1.0	50.00	0	101	70	130	2.15	20	
Chromium	0.49	0.0060	0.5000	0	97.3	70	130	2.02	20	
Copper	0.49	0.0060	0.5000	0	98.4	70	130	2.07	20	
Iron	0.52	0.020	0.5000	0	104	70	130	3.72	20	
Magnesium	51	1.0	50.00	0	102	70	130	2.91	20	
Manganese	0.48	0.0020	0.5000	0	96.8	70	130	2.07	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808F55-002GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**FB05**	Batch ID:	**B54126**		RunNo:	**54126**				
Prep Date:		Analysis Date:	**9/13/2018**		SeqNo:	**1789411**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	50	1.0	50.00	0	100	70	130	3.09	20	
Silver	0.11	0.0050	0.1000	0	108	70	130	1.50	20	
Sodium	52	1.0	50.00	0	105	70	130	4.29	20	
Zinc	0.51	0.010	0.5000	0.01130	99.1	70	130	1.83	20	

Sample ID	**1808F55-009GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**FB06**	Batch ID:	**B54126**		RunNo:	**54126**				
Prep Date:		Analysis Date:	**9/13/2018**		SeqNo:	**1789427**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	70	130			
Cadmium	0.53	0.0020	0.5000	0	106	70	130			
Calcium	50	1.0	50.00	0	100	70	130			
Chromium	0.49	0.0060	0.5000	0	97.4	70	130			
Copper	0.49	0.0060	0.5000	0	98.8	70	130			
Iron	0.53	0.020	0.5000	0	105	70	130			
Magnesium	51	1.0	50.00	0	102	70	130			
Manganese	0.48	0.0020	0.5000	0	97.0	70	130			
Potassium	50	1.0	50.00	0	100	70	130			
Silver	0.11	0.0050	0.1000	0	107	70	130			
Sodium	54	1.0	50.00	0	107	70	130			
Zinc	0.50	0.010	0.5000	0.006940	99.0	70	130			

Sample ID	**1808F55-009GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**FB06**	Batch ID:	**B54126**		RunNo:	**54126**				
Prep Date:		Analysis Date:	**9/13/2018**		SeqNo:	**1789428**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0	105	70	130	1.92	20	
Cadmium	0.54	0.0020	0.5000	0	109	70	130	2.42	20	
Calcium	52	1.0	50.00	0	104	70	130	3.30	20	
Chromium	0.50	0.0060	0.5000	0	99.2	70	130	1.85	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	3.44	20	
Iron	0.53	0.020	0.5000	0	105	70	130	0.0704	20	
Magnesium	53	1.0	50.00	0	105	70	130	2.96	20	
Manganese	0.50	0.0020	0.5000	0	100	70	130	3.37	20	
Potassium	52	1.0	50.00	0	103	70	130	2.74	20	
Silver	0.11	0.0050	0.1000	0	110	70	130	3.18	20	
Sodium	54	1.0	50.00	0	108	70	130	0.448	20	
Zinc	0.51	0.010	0.5000	0.006940	101	70	130	2.39	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40243**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40243**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789743** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-40243**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40243**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789744** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0023	0.0020	0.002000	0	116	50	150			
Cadmium	0.0017	0.0020	0.002000	0	85.5	50	150			J
Chromium	0.0054	0.0060	0.006000	0	90.3	50	150			J
Iron	0.026	0.020	0.02000	0	130	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Silver	0.0060	0.0050	0.005000	0	121	50	150			

Sample ID	**LCS-40243**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40243**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789745** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	104	85	115			
Cadmium	0.53	0.0020	0.5000	0	106	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			

Sample ID	**1808F55-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**MKTF-37**	Batch ID:	**40243**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	101	70	130			
Chromium	0.47	0.0060	0.5000	0	93.0	70	130			
Manganese	0.96	0.0020	0.5000	0.4904	94.7	70	130			
Silver	0.098	0.0050	0.1000	0	97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808F55-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **MKTF-37** Batch ID: **40243** RunNo: **54126**

Prep Date: **9/10/2018** Analysis Date: **9/13/2018** SeqNo: **1789782** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	103	70	130	1.48	20	
Chromium	0.47	0.0060	0.5000	0	93.6	70	130	0.620	20	
Manganese	0.98	0.0020	0.5000	0.4904	97.8	70	130	1.60	20	
Silver	0.10	0.0050	0.1000	0	101	70	130	2.99	20	

Sample ID **1808F55-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB05** Batch ID: **40243** RunNo: **54126**

Prep Date: **9/10/2018** Analysis Date: **9/13/2018** SeqNo: **1789784** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	107	70	130			
Chromium	0.49	0.0060	0.5000	0	98.9	70	130			
Copper	0.50	0.0060	0.5000	0.005120	99.3	70	130			
Iron	0.51	0.020	0.5000	0	103	70	130			
Manganese	0.50	0.0020	0.5000	0	99.1	70	130			
Silver	0.10	0.0050	0.1000	0	102	70	130			
Zinc	0.52	0.010	0.5000	0.003680	104	70	130			

Sample ID **1808F55-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB05** Batch ID: **40243** RunNo: **54126**

Prep Date: **9/10/2018** Analysis Date: **9/13/2018** SeqNo: **1789788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	70	130	1.19	20	
Cadmium	0.53	0.0020	0.5000	0	106	70	130	0.900	20	
Chromium	0.49	0.0060	0.5000	0	98.3	70	130	0.612	20	
Copper	0.50	0.0060	0.5000	0.005120	99.0	70	130	0.293	20	
Iron	0.51	0.020	0.5000	0	102	70	130	0.734	20	
Manganese	0.50	0.0020	0.5000	0	99.1	70	130	0.0283	20	
Silver	0.10	0.0050	0.1000	0	102	70	130	0.167	20	
Zinc	0.52	0.010	0.5000	0.003680	103	70	130	0.961	20	

Sample ID **1808F55-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **MKTF-37** Batch ID: **40243** RunNo: **54126**

Prep Date: **9/10/2018** Analysis Date: **9/13/2018** SeqNo: **1789817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.3	0.010	0.5000	0.8384	97.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808F55-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-37** Batch ID: **40243** RunNo: **54126**
Prep Date: **9/10/2018** Analysis Date: **9/13/2018** SeqNo: **1789818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.3	0.010	0.5000	0.8384	98.3	70	130	0.467	20	

Sample ID **MB-40243** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **40243** RunNo: **54165**
Prep Date: **9/10/2018** Analysis Date: **9/14/2018** SeqNo: **1790763** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID **LLLCS-40243** SampType: **LCSLL** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **40243** RunNo: **54165**
Prep Date: **9/10/2018** Analysis Date: **9/14/2018** SeqNo: **1790764** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0068	0.0060	0.006000	0	114	50	150			

Sample ID **LCS-40243** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **40243** RunNo: **54165**
Prep Date: **9/10/2018** Analysis Date: **9/14/2018** SeqNo: **1790765** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.8	85	115			

Sample ID **1808F55-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-37** Batch ID: **40243** RunNo: **54165**
Prep Date: **9/10/2018** Analysis Date: **9/14/2018** SeqNo: **1790823** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.52	0.0060	0.5000	0.01199	102	70	130			

Sample ID **1808F55-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-37** Batch ID: **40243** RunNo: **54165**
Prep Date: **9/10/2018** Analysis Date: **9/14/2018** SeqNo: **1790824** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.53	0.0060	0.5000	0.01199	103	70	130	0.448	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40395**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40395**	RunNo:	**54217**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793809**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID	**LLLCS-40395**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40395**	RunNo:	**54217**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793810**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	96.6	50	150			J
Zinc	0.0067	0.010	0.005000	0	134	50	150			J

Sample ID	**LCS-40395**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40395**	RunNo:	**54217**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793811**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	102	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53782**	RunNo: **53782**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1774920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53782**	RunNo: **53782**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1774921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.3	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.4	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.2	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	95.9	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53782**	RunNo: **53782**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1774922** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.6	85	115			
Lead	0.012	0.00050	0.01250	0	98.9	85	115			
Selenium	0.025	0.0010	0.02500	0	98.9	85	115			
Uranium	0.013	0.00050	0.01250	0	100	85	115			

Sample ID **1808F55-001GLLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-37**	Batch ID: **B53782**	RunNo: **53782**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1774926** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.002431	112	70	130			
Lead	0.012	0.00050	0.01250	0.0008798	89.0	70	130			
Selenium	0.028	0.0010	0.02500	0	111	70	130			

Sample ID **1808F55-001GLLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-37**	Batch ID: **B53782**	RunNo: **53782**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1774944** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.079	0.0025	0.06250	0.01897	95.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40243**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787309**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40243**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787310**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00050	0.00050	0.0005000	0	99.2	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			
Uranium	0.00050	0.00050	0.0005000	0	100	50	150			

Sample ID	**MSLCS-40243**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787311**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.026	0.0010	0.02500	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	104	85	115			

Sample ID	**1808F55-003FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**EB05**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787317**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	70	130			
Lead	0.013	0.00050	0.01250	0	102	70	130			
Selenium	0.025	0.0010	0.02500	0	102	70	130			
Uranium	0.013	0.00050	0.01250	0	103	70	130			

Sample ID	**1808F55-003FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**EB05**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787318**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808F55-003FLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**EB05**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787318**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	70	130	0.0204	20	
Lead	0.013	0.00050	0.01250	0	101	70	130	1.19	20	
Selenium	0.025	0.0010	0.02500	0	101	70	130	1.16	20	
Uranium	0.013	0.00050	0.01250	0	102	70	130	1.47	20	

Sample ID	**1808F55-004FLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**MKTF-35**	Batch ID:	**40243**	RunNo:	**54085**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/11/2018**	SeqNo:	**1787320**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.029	0.0010	0.02500	0.002695	107	70	130			
Lead	0.015	0.00050	0.01250	0.003675	94.0	70	130			
Selenium	0.027	0.0010	0.02500	0	106	70	130			
Uranium	0.016	0.00050	0.01250	0.003367	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40340**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID: **40340**	RunNo: **54163**
Prep Date:	**9/13/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000055	0.00020								J

Sample ID	**LCS-40340**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID: **40340**	RunNo: **54163**
Prep Date:	**9/13/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.4	80	120			

Sample ID	**1808F55-001FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**MKTF-37**	Batch ID: **40340**	RunNo: **54163**
Prep Date:	**9/13/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001154	102	75	125			

Sample ID	**1808F55-001FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**MKTF-37**	Batch ID: **40340**	RunNo: **54163**
Prep Date:	**9/13/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0.0001154	102	75	125	0.420	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771926** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	93.0	90	110			
Chloride	4.7	0.50	5.000	0	94.7	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.4	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.5	90	110			
Sulfate	9.4	0.50	10.00	0	94.5	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771977** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.2	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	90	110			
Bromide	2.3	0.10	2.500	0	93.0	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	94.3	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.1	0.50	10.00	0	90.9	90	110			

Sample ID **1808F55-009EMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB06**	Batch ID: **A53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771985** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	103	66.7	127			
Chloride	4.8	0.50	5.000	0	96.3	77.5	116			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.5	82.4	108			
Bromide	2.4	0.10	2.500	0	97.6	80.2	111			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.3	79.1	116			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	80.7	113			
Sulfate	9.5	0.50	10.00	0	95.3	74.9	123			

Sample ID **1808F55-009EMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB06**	Batch ID: **A53713**	RunNo: **53713**
Prep Date:	Analysis Date: **8/24/2018**	SeqNo: **1771986** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	66.7	127	0.487	20	
Chloride	4.9	0.50	5.000	0	97.1	77.5	116	0.888	20	
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.6	82.4	108	0.133	20	
Bromide	2.5	0.10	2.500	0	98.3	80.2	111	0.676	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	79.1	116	0.863	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	80.7	113	0.659	20	
Sulfate	9.6	0.50	10.00	0	96.0	74.9	123	0.757	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40109**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779112**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40109**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779113**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.085	0.010	0.1000	0	85.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-40036**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40036**	RunNo: **53783**
Prep Date: **8/28/2018**	Analysis Date: **8/29/2018**	SeqNo: **1775092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.4	70	130			
Surr: DNOP	0.53		0.5000		105	76.7	135			

Sample ID **MB-40036**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40036**	RunNo: **53783**
Prep Date: **8/28/2018**	Analysis Date: **8/29/2018**	SeqNo: **1775093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	76.7	135			

Sample ID **1808F55-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-37**	Batch ID: **40036**	RunNo: **53783**
Prep Date: **8/28/2018**	Analysis Date: **8/29/2018**	SeqNo: **1775095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	7.8	1.0	5.000	3.014	96.5	82.8	143			
Surr: DNOP	0.54		0.5000		108	76.7	135			

Sample ID **1808F55-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-37**	Batch ID: **40036**	RunNo: **53783**
Prep Date: **8/28/2018**	Analysis Date: **8/29/2018**	SeqNo: **1775096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.4	1.0	5.000	3.014	108	82.8	143	7.30	20	
Surr: DNOP	0.58		0.5000		115	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53798**	RunNo: **53798**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1775364** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		91.6	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53798**	RunNo: **53798**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1775365** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	79.5	127			
Surr: BFB	22		20.00		109	69.3	150			

Sample ID **1808F55-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37**	Batch ID: **G53798**	RunNo: **53798**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1775367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	1.0	10.00	16.52	91.6	52.5	149			
Surr: BFB	570		400.0		143	69.3	150			

Sample ID **1808F55-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37**	Batch ID: **G53798**	RunNo: **53798**
Prep Date:	Analysis Date: **8/29/2018**	SeqNo: **1775368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	1.0	10.00	16.52	96.6	52.5	149	1.94	20	
Surr: BFB	570		400.0		142	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773360** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	111	70	130			
Toluene	19	1.0	20.00	0	96.8	70	130			
Chlorobenzene	20	1.0	20.00	0	98.2	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.3	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1773365** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID **1808f55-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-37**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1774026** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1600	10	200.0	1365	93.9	60.5	137			E
Toluene	200	10	200.0	13.94	95.2	70	130			
Chlorobenzene	190	10	200.0	0	96.5	70	130			
1,1-Dichloroethene	290	10	200.0	75.92	109	70	130			
Trichloroethene (TCE)	400	10	200.0	200.3	99.6	70	130			
Surr: 1,2-Dichloroethane-d4	110		100.0		107	70	130			
Surr: 4-Bromofluorobenzene	100		100.0		102	70	130			
Surr: Dibromofluoromethane	110		100.0		106	70	130			
Surr: Toluene-d8	97		100.0		97.0	70	130			

Sample ID **1808f55-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-37**	Batch ID: **R53749**	RunNo: **53749**
Prep Date:	Analysis Date: **8/28/2018**	SeqNo: **1774027** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1400	10	200.0	1365	42.2	60.5	137	6.88	20	ES
Toluene	200	10	200.0	13.94	92.4	70	130	2.82	20	
Chlorobenzene	190	10	200.0	0	93.0	70	130	3.71	20	
1,1-Dichloroethene	280	10	200.0	75.92	100	70	130	6.17	20	
Trichloroethene (TCE)	370	10	200.0	200.3	86.6	70	130	6.73	20	
Surr: 1,2-Dichloroethane-d4	110		100.0		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		104	70	130	0	0	
Surr: Dibromofluoromethane	100		100.0		104	70	130	0	0	
Surr: Toluene-d8	99		100.0		99.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**

25-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40042**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40042**	RunNo: **53982**
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782617** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	64.8	55.1	104			
4-Chloro-3-methylphenol	150	10	200.0	0	75.1	57	115			
2-Chlorophenol	140	10	200.0	0	70.8	43.4	112			
1,4-Dichlorobenzene	61	10	100.0	0	60.9	38	95.2			
2,4-Dinitrotoluene	63	10	100.0	0	62.7	55.1	96.7			
N-Nitrosodi-n-propylamine	81	10	100.0	0	80.5	55	112			
4-Nitrophenol	110	10	200.0	0	52.7	16.6	93			
Pentachlorophenol	130	20	200.0	0	65.2	43.2	104			
Phenol	97	10	200.0	0	48.5	21.3	85.7			
Pyrene	79	10	100.0	0	79.0	64.9	105			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.2	42.6	107			
Surr: 2-Fluorophenol	110		200.0		54.4	15	74.1			
Surr: Phenol-d5	100		200.0		52.0	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		67.7	22.1	112			
Surr: Nitrobenzene-d5	66		100.0		66.0	33.2	94			
Surr: 2-Fluorobiphenyl	63		100.0		62.9	34	90.9			
Surr: 4-Terphenyl-d14	74		100.0		73.8	15	149			

Sample ID **lcsd-40042**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40042**	RunNo: **53982**
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782618** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	77.2	55.1	104	17.5	34.9	
4-Chloro-3-methylphenol	170	10	200.0	0	84.0	57	115	11.2	30.2	
2-Chlorophenol	150	10	200.0	0	73.5	43.4	112	3.77	49.5	
1,4-Dichlorobenzene	68	10	100.0	0	67.6	38	95.2	10.3	43.2	
2,4-Dinitrotoluene	80	10	100.0	0	79.5	55.1	96.7	23.6	49.9	
N-Nitrosodi-n-propylamine	88	10	100.0	0	87.7	55	112	8.51	42.1	
4-Nitrophenol	130	10	200.0	0	63.0	16.6	93	17.7	31.5	
Pentachlorophenol	150	20	200.0	0	76.8	43.2	104	16.4	52.5	
Phenol	97	10	200.0	0	48.6	21.3	85.7	0.247	54.4	
Pyrene	91	10	100.0	0	90.8	64.9	105	13.9	30.7	
1,2,4-Trichlorobenzene	83	10	100.0	0	82.8	42.6	107	15.1	48.1	
Surr: 2-Fluorophenol	120		200.0		58.6	15	74.1	0	0	
Surr: Phenol-d5	110		200.0		53.4	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.0	22.1	112	0	0	
Surr: Nitrobenzene-d5	73		100.0		72.6	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		72.7	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**lcsd-40042**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**40042**		RunNo:	**53982**				
Prep Date:	**8/29/2018**	Analysis Date:	**9/6/2018**		SeqNo:	**1782618**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	67		100.0		67.0	15	149	0	0	

Sample ID	**mb-40042**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**40042**		RunNo:	**53982**				
Prep Date:	**8/29/2018**	Analysis Date:	**9/6/2018**		SeqNo:	**1782620**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40042**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **40042**		RunNo: **53982**		
Prep Date: **8/29/2018**	Analysis Date: **9/6/2018**		SeqNo: **1782620**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808F55**
25-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40042** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **40042** RunNo: **53982**
Prep Date: **8/29/2018** Analysis Date: **9/6/2018** SeqNo: **1782620** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.1	15	74.1			
Surr: Phenol-d5	120		200.0		61.7	15	59.8			S
Surr: 2,4,6-Tribromophenol	130		200.0		63.4	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		69.4	33.2	94			
Surr: 2-Fluorobiphenyl	66		100.0		66.0	34	90.9			
Surr: 4-Terphenyl-d14	67		100.0		67.2	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1808F55 | RcptNo: 1

Received By: Anne Thorne 8/24/2018 1:45:00 PM

Completed By: Anne Thorne 8/24/2018 2:07:04 PM

Reviewed By: 08/24/18 ENM 8/28/18

Labeled by: AT / MJ / JAB 08/28/18

Chain of Custody

XLO3 08/24/18

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 36 (<2 or >12 unless noted)

Adjusted? No

Checked by: AT / JAB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: Custody Seals intact on all bottles / AT 08/24/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/23/18	1230	H_2O	MKTF-37	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	001					X											
				1 Liter Amber - 1	Neat	001											X					
				250 ml Amber-1	Neat	001			X													
				250 ml Plastic-1	HNO_3	001												X				
				125 ml Plastic-1	HNO_3	001												X	X			
				125 ml Plastic-1	H_2SO_4	001													X			
				125 ml Plastic-1	Neat	001													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808455	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/23/18	1410	H_2O	FB05	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -	Neat	-002											X					
				250 ml Amber-1	Neat	-002			X													
				250 ml Plastic-1	HNO_3	-002												X				
				125 ml Plastic-1	HNO_3	-002												X	X			
				125 ml Plastic-1	H_2SO_4	-002													X			
				125 ml Plastic-1	Neat	-002													X			
				40mL VOA 3	$NA_2S_2O_3$						X											

Date	Time	Relinquished by	Received by	Date	Time
8/23/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808555	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/23/18	1430	H_2O	EB05	40ml VOA-5	HCl	003			X							X						
				1 Liter Amber -1	Neat	003											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	003												X					
				125 ml Plastic-1	HNO_3	003												X	X				
				125 ml Plastic-1	H_2SO_4	003													X				
				125 ml Plastic-1	Neat	003													X				
				40 ML VOA-3	$Na_2S_2O_3$	003					X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808 F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	**EDB & EDC (Method 8011)**	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
8/23/18	1500	H_2O	MKTF-35	40ml VOA-5	HCl	204			X							X						
				40ml VOA-3	$Na_2S_2O_3$	204					X											
				1 Liter Amber -1	Neat	204											X					
				250 ml Amber-1	Neat	204			X													
				250 ml Plastic-1	HNO_3	204												X				
				125 ml Plastic-1	HNO_3	204												X	X			
				125 ml Plastic-1	H_2SO_4	204													X			
				125 ml Plastic-1	Neat	204													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 808 F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/23/18	—	H_2O	DUP05	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$	-005					X											
				1 Liter Amber -1	Neat	-005											X					
				250 ml Amber-1	Neat	-005			X													
				250 ml Plastic-1	HNO_3	-005												X				
				125 ml Plastic-1	HNO_3	-005												X	X			
				125 ml Plastic-1	H_2SO_4	-005													X			
				125 ml Plastic-1	Neat	-007													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808 F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	0740	H_2O	MKTF-34	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -2	Neat	003											X					
				250 ml Amber-1	Neat	004			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	007													X			
				125 ml Plastic-1	Neat	008													X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/24/18	1345			8/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	0820	H_2O	MKTF-17 [redacted]	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	002											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	004												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	006													X			
				125 ml Plastic-1	Neat	007													X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			8/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F 55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	0855	H_2O	MKTF-19	40ml VOA-5	HCl	208			X							X						
				40ml VOA-3	$Na_2S_2O_3$	208					X											
				1 Liter Amber -1	Neat	208											X					
				250 ml Amber-1	Neat	209			X													
				250 ml Plastic-1	HNO_3	208												X				
				125 ml Plastic-1	HNO_3	208												X	X			
				125 ml Plastic-1	H_2SO_4	208													X			
				125 ml Plastic-1	Neat	209													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	0940	H_2O	FB06	40ml VOA-5	HCl	-009			X							X						
				1 Liter Amber -	Neat	-009											X					
				250 ml Amber-1	Neat	-009			X													
				250 ml Plastic-1	HNO_3	-009												X				
				125 ml Plastic-1	HNO_3	-009												X	X			
				125 ml Plastic-1	H_2SO_4	-009													X			
				125 ml Plastic-1	Neat	-009													X			
↓	↓	↓	↓	40 ml VOA-3	$Na_2S_2O_3$	-009					X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808 F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	0955	H_2O	EB06	40ml VOA-5	HCl	010			X							X						
				1 Liter Amber -	Neat	010											X					
				250 ml Amber-1	Neat	010			X													
				250 ml Plastic-1	HNO_3	010												X				
				125 ml Plastic-1	HNO_3	010												X	X			
				125 ml Plastic-1	H_2SO_4	010													X			
				125 ml Plastic-1	Neat	010													X			
				40 ml VOA-3	$NA_2S_2O_3$	010					X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			08/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808 F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	**EDB & EDC (Method 8011)**	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
8/24/18	1025	H_2O	MKTF-18	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -1	Neat	003											X					
				250 ml Amber-1	Neat	004			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	007													X			
				125 ml Plastic-1	Neat	008													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/24/18	1345			8/24/18	1345
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0° 4 coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808F55	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/24/18	—	H_2O	DUP06	40ml VOA-5	HCl	012			X							X						
				1 Liter Amber -1	Neat	012											X					
				250 ml Amber-1	Neat	012			X													
				250 ml Plastic-1	HNO_3	012												X				
				125 ml Plastic-1	HNO_3	012												X	X			
				125 ml Plastic-1	H_2SO_4	012													X			
				125 ml Plastic-1	Neat	012													X			
8/24/18	—	H_2O	TRIP BLANK	40ml VOA	HCl	013										X						

Date: 8/24/18 Time: 1345 Relinquished by: _____
Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: 08/24/18 Time: 1345
Received by: _____ Date: _____ Time: _____

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808H79

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 14 sample(s) on 8/30/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 11:56:14 AM	G53866
Surr: BFB	109	0	69.3-150		%Rec	1	8/31/2018 11:56:14 AM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Toluene	ND	0.17	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Methyl tert-butyl ether (MTBE)	0.54	0.32	1.0	J	µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Naphthalene	ND	0.29	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Acetone	3.2	0.79	10	J	µg/L	1	9/5/2018 5:10:00 PM	R53912
Bromobenzene	ND	0.32	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Bromoform	ND	0.32	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Bromomethane	ND	0.26	3.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
2-Butanone	ND	1.3	10		µg/L	1	9/5/2018 5:10:00 PM	R53912
Carbon disulfide	ND	0.39	10		µg/L	1	9/5/2018 5:10:00 PM	R53912
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Chloroethane	ND	0.16	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Chloroform	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Chloromethane	ND	0.29	3.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Dibromomethane	ND	0.32	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
2-Hexanone	ND	0.91	10		µg/L	1	9/5/2018 5:10:00 PM	R53912
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/5/2018 5:10:00 PM	R53912
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Styrene	ND	0.25	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/5/2018 5:10:00 PM	R53912
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/5/2018 5:10:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	9/5/2018 5:10:00 PM	R53912
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	9/5/2018 5:10:00 PM	R53912
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/5/2018 5:10:00 PM	R53912
Surr: Toluene-d8	91.0	0	70-130		%Rec	1	9/5/2018 5:10:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 1:14:35 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 1:14:35 PM	40100
Surr: DNOP	119	0	76.7-135		%Rec	1	9/4/2018 1:14:35 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 1:35:40 PM	R53843
Chloride	1800	36	100		mg/L	200	9/17/2018 1:31:03 PM	R54214
Bromide	4.4	0.13	0.50		mg/L	5	8/30/2018 1:35:40 PM	R53843
Phosphorus, Orthophosphate (As P)	0.90	0.46	2.5	JH	mg/L	5	8/30/2018 1:35:40 PM	R53843
Sulfate	760	4.1	10		mg/L	20	8/30/2018 1:48:31 PM	R53843
Nitrate+Nitrite as N	18	0.27	1.0	*	mg/L	5	8/30/2018 4:35:44 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.096	0.0010	0.0020		mg/L	1	9/13/2018 5:54:07 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 5:54:07 PM	40257
Chromium	0.0063	0.0018	0.0060		mg/L	1	9/13/2018 5:54:07 PM	40257
Copper	0.0064	0.0041	0.0060		mg/L	1	9/13/2018 5:54:07 PM	40257
Iron	2.5	0.051	0.10	*	mg/L	5	9/13/2018 6:52:42 PM	40257
Manganese	0.19	0.0011	0.0020	*	mg/L	1	9/13/2018 5:54:07 PM	40257
Silver	0.0031	0.0012	0.0050	J	mg/L	1	9/13/2018 5:54:07 PM	40257
Zinc	0.0081	0.0033	0.010	J	mg/L	1	9/13/2018 5:54:07 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0029	0.0021	0.0050	J	mg/L	5	9/12/2018 6:20:07 PM	40257
Lead	0.0017	0.00023	0.00050		mg/L	1	9/12/2018 4:27:58 PM	40257
Selenium	0.016	0.0049	0.0050		mg/L	5	9/12/2018 6:20:07 PM	40257
Uranium	0.053	0.00034	0.0025	*	mg/L	5	9/12/2018 6:20:07 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000096	0.000038	0.00020	J	mg/L	1	9/17/2018 4:34:24 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.028	0.00099	0.0020		mg/L	1	9/18/2018 11:21:10 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:21:10 AM	A54217
Calcium	110	0.39	5.0		mg/L	5	9/18/2018 11:23:19 AM	A54217
Chromium	0.0032	0.0013	0.0060	J	mg/L	1	9/18/2018 11:21:10 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:21:10 AM	A54217
Iron	0.023	0.016	0.020		mg/L	1	9/18/2018 11:21:10 AM	A54217
Magnesium	16	0.25	1.0		mg/L	1	9/18/2018 11:21:10 AM	A54217
Manganese	0.017	0.00039	0.0020		mg/L	1	9/18/2018 11:21:10 AM	A54217
Potassium	3.2	0.11	1.0		mg/L	1	9/18/2018 11:21:10 AM	A54217
Silver	0.0032	0.0018	0.0050	J	mg/L	1	9/18/2018 11:21:10 AM	A54217
Sodium	1500	3.3	20		mg/L	20	9/18/2018 3:00:14 PM	A54217
Zinc	0.0068	0.0021	0.010	J	mg/L	1	9/18/2018 11:21:10 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/5/2018 12:11:32 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 12:11:32 PM	B53936
Selenium	0.019	0.0038	0.0050		mg/L	5	9/5/2018 12:11:32 PM	B53936
Uranium	0.052	0.00048	0.0025	*	mg/L	5	9/5/2018 12:11:32 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000098	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 4:41:07 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Benzoic acid	7.1	6.3	20	J	µg/L	1	9/12/2018 11:56:08 AM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-60
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:25:00 AM
Lab ID: 1808H79-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 11:56:08 AM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 11:56:08 AM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 11:56:08 AM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 11:56:08 AM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 11:56:08 AM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 11:56:08 AM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 11:56:08 AM	40131
Surr: 2-Fluorophenol	31.2	0	15-74.1		%Rec	1	9/12/2018 11:56:08 AM	40131
Surr: Phenol-d5	31.5	0	15-59.8		%Rec	1	9/12/2018 11:56:08 AM	40131
Surr: 2,4,6-Tribromophenol	59.4	0	22.1-112		%Rec	1	9/12/2018 11:56:08 AM	40131
Surr: Nitrobenzene-d5	40.5	0	33.2-94		%Rec	1	9/12/2018 11:56:08 AM	40131
Surr: 2-Fluorobiphenyl	46.0	0	34-90.9		%Rec	1	9/12/2018 11:56:08 AM	40131
Surr: 4-Terphenyl-d14	79.3	0	15-149		%Rec	1	9/12/2018 11:56:08 AM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.064	0.024	0.050		mg/L	1	8/31/2018 12:19:37 PM	G53866
Surr: BFB	4820	0	69.3-150	S	%Rec	1	8/31/2018 12:19:37 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Toluene	ND	0.17	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Methyl tert-butyl ether (MTBE)	10	0.32	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Naphthalene	ND	0.29	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Acetone	4.3	0.79	10	J	µg/L	1	9/5/2018 6:23:00 PM	R53912
Bromobenzene	ND	0.32	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Bromoform	ND	0.32	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Bromomethane	ND	0.26	3.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
2-Butanone	ND	1.3	10		µg/L	1	9/5/2018 6:23:00 PM	R53912
Carbon disulfide	ND	0.39	10		µg/L	1	9/5/2018 6:23:00 PM	R53912
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Chloroethane	ND	0.16	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Chloroform	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Chloromethane	ND	0.29	3.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Dibromomethane	ND	0.32	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
2-Hexanone	ND	0.91	10		µg/L	1	9/5/2018 6:23:00 PM	R53912
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/5/2018 6:23:00 PM	R53912
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Styrene	ND	0.25	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/5/2018 6:23:00 PM	R53912
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/5/2018 6:23:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	116	0	70-130		%Rec	1	9/5/2018 6:23:00 PM	R53912
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	9/5/2018 6:23:00 PM	R53912
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	9/5/2018 6:23:00 PM	R53912
Surr: Toluene-d8	90.9	0	70-130		%Rec	1	9/5/2018 6:23:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 2:28:12 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 2:28:12 PM	40100
Surr: DNOP	114	0	76.7-135		%Rec	1	9/4/2018 2:28:12 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.16	0.50		mg/L	5	9/17/2018 2:20:42 PM	R54214
Chloride	2100	36	100		mg/L	200	9/17/2018 1:43:27 PM	R54214
Bromide	2.8	0.54	2.0		mg/L	20	8/30/2018 2:14:15 PM	R53843
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/17/2018 2:20:42 PM	R54214
Sulfate	2600	41	100		mg/L	200	9/17/2018 1:43:27 PM	R54214
Nitrate+Nitrite as N	ND	0.55	2.0		mg/L	10	9/17/2018 3:10:19 PM	R54214

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.038	0.0010	0.0020		mg/L	1	9/13/2018 6:00:08 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:00:08 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:00:08 PM	40257
Copper	0.0043	0.0041	0.0060	J	mg/L	1	9/13/2018 6:00:08 PM	40257
Iron	0.97	0.010	0.020	*	mg/L	1	9/13/2018 6:00:08 PM	40257
Manganese	0.064	0.0011	0.0020	*	mg/L	1	9/13/2018 6:00:08 PM	40257
Silver	0.0056	0.0012	0.0050		mg/L	1	9/13/2018 6:00:08 PM	40257
Zinc	0.0049	0.0033	0.010	J	mg/L	1	9/13/2018 6:00:08 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0068	0.0021	0.0050		mg/L	5	9/12/2018 6:22:25 PM	40257
Lead	ND	0.0011	0.0025		mg/L	5	9/12/2018 6:22:25 PM	40257
Selenium	ND	0.0049	0.0050		mg/L	5	9/12/2018 6:22:25 PM	40257
Uranium	0.14	0.00068	0.0050	*	mg/L	10	9/12/2018 6:57:26 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000097	0.000038	0.00020	J	mg/L	1	9/17/2018 4:43:23 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.011	0.00099	0.0020		mg/L	1	9/18/2018 11:25:26 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:25:26 AM	A54217
Calcium	200	0.39	5.0		mg/L	5	9/18/2018 11:27:33 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:25:26 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:25:26 AM	A54217
Iron	ND	0.016	0.020		mg/L	1	9/18/2018 11:25:26 AM	A54217
Magnesium	61	0.25	1.0		mg/L	1	9/18/2018 11:25:26 AM	A54217
Manganese	0.025	0.00039	0.0020		mg/L	1	9/18/2018 11:25:26 AM	A54217
Potassium	0.73	0.11	1.0	J	mg/L	1	9/18/2018 11:25:26 AM	A54217
Silver	0.0057	0.0018	0.0050		mg/L	1	9/18/2018 11:25:26 AM	A54217
Sodium	2500	8.2	50		mg/L	50	9/18/2018 3:02:13 PM	A54217
Zinc	0.0068	0.0021	0.010	J	mg/L	1	9/18/2018 11:25:26 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0053	0.0021	0.0050		mg/L	5	9/5/2018 12:13:54 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 12:13:54 PM	B53936
Selenium	ND	0.0038	0.0050		mg/L	5	9/5/2018 12:13:54 PM	B53936
Uranium	0.14	0.00096	0.0050	*	mg/L	10	9/5/2018 1:59:21 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000064	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 4:45:38 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzoic acid	ND	6.3	20		µg/L	1	9/12/2018 12:25:39 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-59
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 7:55:00 AM
Lab ID: 1808H79-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 12:25:39 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 12:25:39 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 12:25:39 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 12:25:39 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 12:25:39 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 12:25:39 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 12:25:39 PM	40131
Surr: 2-Fluorophenol	14.2	0	15-74.1	S	%Rec	1	9/12/2018 12:25:39 PM	40131
Surr: Phenol-d5	31.2	0	15-59.8		%Rec	1	9/12/2018 12:25:39 PM	40131
Surr: 2,4,6-Tribromophenol	19.3	0	22.1-112	S	%Rec	1	9/12/2018 12:25:39 PM	40131
Surr: Nitrobenzene-d5	62.7	0	33.2-94		%Rec	1	9/12/2018 12:25:39 PM	40131
Surr: 2-Fluorobiphenyl	56.0	0	34-90.9		%Rec	1	9/12/2018 12:25:39 PM	40131
Surr: 4-Terphenyl-d14	84.6	0	15-149		%Rec	1	9/12/2018 12:25:39 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.1	0.024	0.050		mg/L	1	8/31/2018 12:43:00 PM	G53866
Surr: BFB	96.9	0	69.3-150		%Rec	1	8/31/2018 12:43:00 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	52	0.35	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Toluene	1.1	0.34	2.0	J	µg/L	2	9/5/2018 7:11:00 PM	R53912
Ethylbenzene	8.3	0.45	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Methyl tert-butyl ether (MTBE)	2000	6.4	20		µg/L	20	9/5/2018 6:47:00 PM	R53912
1,2,4-Trimethylbenzene	7.9	0.51	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Naphthalene	ND	0.58	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
2-Methylnaphthalene	ND	0.48	8.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Acetone	ND	1.6	20		µg/L	2	9/5/2018 7:11:00 PM	R53912
Bromobenzene	ND	0.64	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Bromodichloromethane	ND	0.57	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Bromoform	ND	0.65	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Bromomethane	ND	0.51	6.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
2-Butanone	ND	2.5	20		µg/L	2	9/5/2018 7:11:00 PM	R53912
Carbon disulfide	ND	0.77	20		µg/L	2	9/5/2018 7:11:00 PM	R53912
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Chlorobenzene	ND	0.58	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Chloroethane	ND	0.33	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Chloroform	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Chloromethane	ND	0.59	6.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Dibromochloromethane	ND	0.47	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Dibromomethane	ND	0.64	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1-Dichloroethene	ND	0.24	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2-Dichloropropane	ND	0.31	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
2,2-Dichloropropane	ND	0.37	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1-Dichloropropene	ND	0.32	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
2-Hexanone	ND	1.8	20		µg/L	2	9/5/2018 7:11:00 PM	R53912
Isopropylbenzene	ND	0.44	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	9/5/2018 7:11:00 PM	R53912
Methylene Chloride	ND	0.41	6.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
n-Butylbenzene	ND	0.50	6.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
n-Propylbenzene	0.76	0.49	2.0	J	µg/L	2	9/5/2018 7:11:00 PM	R53912
sec-Butylbenzene	0.55	0.40	2.0	J	µg/L	2	9/5/2018 7:11:00 PM	R53912
Styrene	ND	0.50	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1,1-Trichloroethane	ND	0.31	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Trichlorofluoromethane	ND	0.34	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Vinyl chloride	ND	0.22	2.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Xylenes, Total	ND	1.3	3.0		µg/L	2	9/5/2018 7:11:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	2	9/5/2018 7:11:00 PM	R53912
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	2	9/5/2018 7:11:00 PM	R53912
Surr: Dibromofluoromethane	103	0	70-130		%Rec	2	9/5/2018 7:11:00 PM	R53912
Surr: Toluene-d8	93.8	0	70-130		%Rec	2	9/5/2018 7:11:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.2	0.63	1.0		mg/L	1	9/4/2018 2:52:50 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 2:52:50 PM	40100
Surr: DNOP	118	0	76.7-135		%Rec	1	9/4/2018 2:52:50 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 2:52:50 PM	R53843
Chloride	260	0.59	10		mg/L	20	8/30/2018 3:05:41 PM	R53843
Bromide	2.1	0.13	0.50		mg/L	5	8/30/2018 2:52:50 PM	R53843
Phosphorus, Orthophosphate (As P)	2.5	0.46	2.5	H	mg/L	5	8/30/2018 2:52:50 PM	R53843
Sulfate	30	1.0	2.5		mg/L	5	8/30/2018 2:52:50 PM	R53843
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/30/2018 5:40:04 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	9/18/2018 11:29:39 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:29:39 AM	A54217
Calcium	62	0.078	1.0		mg/L	1	9/18/2018 11:29:39 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:29:39 AM	A54217
Copper	0.011	0.0032	0.0060		mg/L	1	9/18/2018 11:29:39 AM	A54217
Iron	0.30	0.016	0.020	*	mg/L	1	9/18/2018 11:29:39 AM	A54217
Magnesium	17	0.25	1.0		mg/L	1	9/18/2018 11:29:39 AM	A54217
Manganese	1.3	0.0020	0.010	*	mg/L	5	9/18/2018 11:31:48 AM	A54217
Potassium	ND	0.11	1.0		mg/L	1	9/18/2018 11:29:39 AM	A54217
Silver	0.0023	0.0018	0.0050	J	mg/L	1	9/18/2018 11:29:39 AM	A54217
Sodium	410	0.82	5.0		mg/L	5	9/18/2018 11:31:48 AM	A54217
Zinc	0.010	0.0021	0.010		mg/L	1	9/18/2018 11:29:39 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0045	0.00042	0.0010		mg/L	1	9/5/2018 2:06:29 PM	B53936
Lead	0.0097	0.00017	0.00050		mg/L	1	9/5/2018 2:06:29 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 2:06:29 PM	B53936
Uranium	0.055	0.00048	0.0025	*	mg/L	5	9/5/2018 12:16:17 PM	B53936

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.19	0.0010	0.0020		mg/L	1	9/13/2018 6:02:06 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:02:06 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:02:06 PM	40257
Copper	0.024	0.0041	0.0060		mg/L	1	9/13/2018 6:02:06 PM	40257
Iron	1.1	0.051	0.10	*	mg/L	5	9/13/2018 6:58:48 PM	40257
Manganese	1.4	0.0055	0.010	*	mg/L	5	9/13/2018 6:58:48 PM	40257
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/13/2018 6:02:06 PM	40257
Zinc	0.0070	0.0033	0.010	J	mg/L	1	9/13/2018 6:02:06 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0047	0.00041	0.0010		mg/L	1	9/12/2018 4:44:02 PM	40257
Lead	0.013	0.00023	0.00050		mg/L	1	9/12/2018 4:44:02 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:44:02 PM	40257
Uranium	0.060	0.00034	0.0025	*	mg/L	5	9/12/2018 6:29:17 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000061	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 4:54:49 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Benzoic acid	11	6.3	20	J	µg/L	1	9/12/2018 12:55:09 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-54
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:25:00 AM
Lab ID: 1808H79-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 12:55:09 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 12:55:09 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 12:55:09 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 12:55:09 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 12:55:09 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 12:55:09 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 12:55:09 PM	40131
Surr: 2-Fluorophenol	40.2	0	15-74.1		%Rec	1	9/12/2018 12:55:09 PM	40131
Surr: Phenol-d5	35.8	0	15-59.8		%Rec	1	9/12/2018 12:55:09 PM	40131
Surr: 2,4,6-Tribromophenol	63.5	0	22.1-112		%Rec	1	9/12/2018 12:55:09 PM	40131
Surr: Nitrobenzene-d5	53.1	0	33.2-94		%Rec	1	9/12/2018 12:55:09 PM	40131
Surr: 2-Fluorobiphenyl	53.2	0	34-90.9		%Rec	1	9/12/2018 12:55:09 PM	40131
Surr: 4-Terphenyl-d14	89.4	0	15-149		%Rec	1	9/12/2018 12:55:09 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	23	0.49	1.0		mg/L	20	8/31/2018 1:06:31 PM	G53866
Surr: BFB	103	0	69.3-150		%Rec	20	8/31/2018 1:06:31 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	7900	35	200		µg/L	200	9/5/2018 7:35:00 PM	R53912
Toluene	330	3.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Ethylbenzene	650	4.5	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Methyl tert-butyl ether (MTBE)	1700	6.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2,4-Trimethylbenzene	120	5.1	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,3,5-Trimethylbenzene	24	4.6	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Naphthalene	18	5.8	40	J	µg/L	20	9/5/2018 7:59:00 PM	R53912
1-Methylnaphthalene	11	6.7	80	J	µg/L	20	9/5/2018 7:59:00 PM	R53912
2-Methylnaphthalene	ND	4.8	80		µg/L	20	9/5/2018 7:59:00 PM	R53912
Acetone	ND	16	200		µg/L	20	9/5/2018 7:59:00 PM	R53912
Bromobenzene	ND	6.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Bromodichloromethane	ND	5.7	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Bromoform	ND	6.5	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Bromomethane	ND	5.1	60		µg/L	20	9/5/2018 7:59:00 PM	R53912
2-Butanone	ND	25	200		µg/L	20	9/5/2018 7:59:00 PM	R53912
Carbon disulfide	ND	7.7	200		µg/L	20	9/5/2018 7:59:00 PM	R53912
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Chlorobenzene	ND	5.8	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Chloroethane	ND	3.3	40		µg/L	20	9/5/2018 7:59:00 PM	R53912
Chloroform	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Chloromethane	ND	5.9	60		µg/L	20	9/5/2018 7:59:00 PM	R53912
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
cis-1,2-DCE	ND	7.5	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/5/2018 7:59:00 PM	R53912
Dibromochloromethane	ND	4.7	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Dibromomethane	ND	6.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1-Dichloroethene	ND	2.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/5/2018 7:59:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Hexachlorobutadiene	ND	16	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
2-Hexanone	ND	18	200		µg/L	20	9/5/2018 7:59:00 PM	R53912
Isopropylbenzene	22	4.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	9/5/2018 7:59:00 PM	R53912
Methylene Chloride	ND	4.1	60		µg/L	20	9/5/2018 7:59:00 PM	R53912
n-Butylbenzene	6.7	5.0	60	J	µg/L	20	9/5/2018 7:59:00 PM	R53912
n-Propylbenzene	58	4.9	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
sec-Butylbenzene	4.8	4.0	20	J	µg/L	20	9/5/2018 7:59:00 PM	R53912
Styrene	ND	5.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/5/2018 7:59:00 PM	R53912
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/5/2018 7:59:00 PM	R53912
Vinyl chloride	ND	2.2	20		µg/L	20	9/5/2018 7:59:00 PM	R53912
Xylenes, Total	290	13	30		µg/L	20	9/5/2018 7:59:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	20	9/5/2018 7:59:00 PM	R53912
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	20	9/5/2018 7:59:00 PM	R53912
Surr: Dibromofluoromethane	105	0	70-130		%Rec	20	9/5/2018 7:59:00 PM	R53912
Surr: Toluene-d8	91.5	0	70-130		%Rec	20	9/5/2018 7:59:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.1	0.63	1.0		mg/L	1	9/4/2018 3:17:23 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 3:17:23 PM	40100
Surr: DNOP	114	0	76.7-135		%Rec	1	9/4/2018 3:17:23 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 3:18:33 PM	R53843
Chloride	300	0.59	10		mg/L	20	8/30/2018 3:31:25 PM	R53843
Bromide	1.1	0.13	0.50		mg/L	5	8/30/2018 3:18:33 PM	R53843
Phosphorus, Orthophosphate (As P)	3.1	0.46	2.5	H	mg/L	5	8/30/2018 3:18:33 PM	R53843
Sulfate	1.9	1.0	2.5	J	mg/L	5	8/30/2018 3:18:33 PM	R53843
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/30/2018 5:52:56 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.55	0.0010	0.0020		mg/L	1	9/13/2018 6:04:05 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:04:05 PM	40257
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	9/13/2018 6:04:05 PM	40257
Copper	0.0053	0.0041	0.0060	J	mg/L	1	9/13/2018 6:04:05 PM	40257
Iron	6.8	0.10	0.20	*	mg/L	10	9/13/2018 7:00:51 PM	40257
Manganese	3.8	0.011	0.020	*	mg/L	10	9/13/2018 7:00:51 PM	40257
Silver	0.0027	0.0012	0.0050	J	mg/L	1	9/13/2018 6:04:05 PM	40257
Zinc	0.013	0.0033	0.010		mg/L	1	9/13/2018 6:04:05 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0070	0.00041	0.0010		mg/L	1	9/12/2018 4:46:20 PM	40257
Lead	0.0039	0.00023	0.00050		mg/L	1	9/12/2018 4:46:20 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:46:20 PM	40257
Uranium	0.0064	0.00034	0.0025		mg/L	5	9/18/2018 1:37:24 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000069	0.000038	0.00020	J	mg/L	1	9/17/2018 4:57:06 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.51	0.00099	0.0020		mg/L	1	9/18/2018 11:33:48 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:33:48 AM	A54217
Calcium	100	0.39	5.0		mg/L	5	9/18/2018 11:35:47 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:33:48 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:33:48 AM	A54217
Iron	3.4	0.082	0.10	*	mg/L	5	9/18/2018 11:35:47 AM	A54217
Magnesium	29	0.25	1.0		mg/L	1	9/18/2018 11:33:48 AM	A54217
Manganese	3.6	0.0020	0.010	*	mg/L	5	9/18/2018 11:35:47 AM	A54217
Potassium	ND	0.11	1.0		mg/L	1	9/18/2018 11:33:48 AM	A54217
Silver	0.0030	0.0018	0.0050	J	mg/L	1	9/18/2018 11:33:48 AM	A54217
Sodium	360	0.82	5.0		mg/L	5	9/18/2018 11:35:47 AM	A54217
Zinc	0.013	0.0021	0.010		mg/L	1	9/18/2018 11:33:48 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0044	0.00042	0.0010		mg/L	1	9/5/2018 2:08:51 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 2:08:51 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 2:08:51 PM	B53936
Uranium	0.0037	0.000096	0.00050		mg/L	1	9/5/2018 2:08:51 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000066	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 4:59:24 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Benzoic acid	11	6.3	20	J	µg/L	1	9/12/2018 1:24:52 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-55
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 8:55:00 AM
Lab ID: 1808H79-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 1:24:52 PM	40131
1-Methylnaphthalene	8.0	7.0	10	J	µg/L	1	9/12/2018 1:24:52 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 1:24:52 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 1:24:52 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Naphthalene	11	5.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 1:24:52 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 1:24:52 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Phenol	15	6.0	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 1:24:52 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 1:24:52 PM	40131
Surr: 2-Fluorophenol	22.6	0	15-74.1		%Rec	1	9/12/2018 1:24:52 PM	40131
Surr: Phenol-d5	23.6	0	15-59.8		%Rec	1	9/12/2018 1:24:52 PM	40131
Surr: 2,4,6-Tribromophenol	51.4	0	22.1-112		%Rec	1	9/12/2018 1:24:52 PM	40131
Surr: Nitrobenzene-d5	39.2	0	33.2-94		%Rec	1	9/12/2018 1:24:52 PM	40131
Surr: 2-Fluorobiphenyl	38.6	0	34-90.9		%Rec	1	9/12/2018 1:24:52 PM	40131
Surr: 4-Terphenyl-d14	71.7	0	15-149		%Rec	1	9/12/2018 1:24:52 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.59	0.024	0.050		mg/L	1	8/31/2018 2:40:31 PM	G53866
Surr: BFB	606	0	69.3-150	S	%Rec	1	8/31/2018 2:40:31 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.1	0.17	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Toluene	ND	0.17	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Methyl tert-butyl ether (MTBE)	69	0.32	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2-Dichloroethane (EDC)	12	0.40	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Naphthalene	ND	0.29	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Acetone	9.9	0.79	10	J	µg/L	1	9/5/2018 8:23:00 PM	R53912
Bromobenzene	ND	0.32	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Bromoform	ND	0.32	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Bromomethane	ND	0.26	3.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
2-Butanone	ND	1.3	10		µg/L	1	9/5/2018 8:23:00 PM	R53912
Carbon disulfide	ND	0.39	10		µg/L	1	9/5/2018 8:23:00 PM	R53912
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Chloroethane	ND	0.16	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Chloroform	ND	0.40	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Chloromethane	ND	0.29	3.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Dibromomethane	ND	0.32	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1-Dichloroethane	0.49	0.40	1.0	J	µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
2-Hexanone	ND	0.91	10		µg/L	1	9/5/2018 8:23:00 PM	R53912
Isopropylbenzene	0.48	0.22	1.0	J	µg/L	1	9/5/2018 8:23:00 PM	R53912
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/5/2018 8:23:00 PM	R53912
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Styrene	ND	0.25	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/5/2018 8:23:00 PM	R53912
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/5/2018 8:23:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	9/5/2018 8:23:00 PM	R53912
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	9/5/2018 8:23:00 PM	R53912
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/5/2018 8:23:00 PM	R53912
Surr: Toluene-d8	93.4	0	70-130		%Rec	1	9/5/2018 8:23:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.68	0.63	1.0	J	mg/L	1	9/4/2018 3:42:03 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 3:42:03 PM	40100
Surr: DNOP	110	0	76.7-135		%Rec	1	9/4/2018 3:42:03 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 3:44:17 PM	R53843
Chloride	620	9.1	25		mg/L	50	9/17/2018 2:33:06 PM	R54214
Bromide	1.8	0.13	0.50		mg/L	5	8/30/2018 3:44:17 PM	R53843
Phosphorus, Orthophosphate (As P)	1.9	0.46	2.5	JH	mg/L	5	8/30/2018 3:44:17 PM	R53843
Sulfate	21	1.0	2.5		mg/L	5	8/30/2018 3:44:17 PM	R53843
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/30/2018 6:05:47 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.57	0.0010	0.0020		mg/L	1	9/13/2018 6:06:05 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:06:05 PM	40257
Chromium	0.0060	0.0018	0.0060	J	mg/L	1	9/13/2018 6:06:05 PM	40257
Copper	0.017	0.0041	0.0060		mg/L	1	9/13/2018 6:06:05 PM	40257
Iron	6.0	0.10	0.20	*	mg/L	10	9/13/2018 7:02:54 PM	40257
Manganese	0.44	0.0011	0.0020	*	mg/L	1	9/13/2018 6:06:05 PM	40257
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/13/2018 6:06:05 PM	40257
Zinc	0.031	0.0033	0.010		mg/L	1	9/13/2018 6:06:05 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0046	0.00041	0.0010		mg/L	1	9/12/2018 4:48:37 PM	40257
Lead	0.0070	0.00023	0.00050		mg/L	1	9/12/2018 4:48:37 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:48:37 PM	40257
Uranium	0.020	0.00034	0.0025		mg/L	5	9/13/2018 5:39:09 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000092	0.000038	0.00020	J	mg/L	1	9/17/2018 5:01:42 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.39	0.00099	0.0020		mg/L	1	9/18/2018 11:44:19 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:44:19 AM	A54217
Calcium	85	0.078	1.0		mg/L	1	9/18/2018 11:44:19 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:44:19 AM	A54217
Copper	0.0061	0.0032	0.0060		mg/L	1	9/18/2018 11:44:19 AM	A54217
Iron	0.60	0.016	0.020	*	mg/L	1	9/18/2018 11:44:19 AM	A54217
Magnesium	15	0.25	1.0		mg/L	1	9/18/2018 11:44:19 AM	A54217
Manganese	0.12	0.00039	0.0020	*	mg/L	1	9/18/2018 11:44:19 AM	A54217
Potassium	1.2	0.11	1.0		mg/L	1	9/18/2018 11:44:19 AM	A54217
Silver	0.0027	0.0018	0.0050	J	mg/L	1	9/18/2018 11:44:19 AM	A54217
Sodium	480	0.82	5.0		mg/L	5	9/18/2018 11:46:19 AM	A54217
Zinc	0.011	0.0021	0.010		mg/L	1	9/18/2018 11:44:19 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	9/5/2018 2:11:16 PM	B53936
Lead	0.00058	0.00017	0.00050		mg/L	1	9/5/2018 2:11:16 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 2:11:16 PM	B53936
Uranium	0.016	0.000096	0.00050		mg/L	1	9/5/2018 2:11:16 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000063	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 5:04:01 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Benzoic acid	6.8	6.3	20	J	µg/L	1	9/12/2018 1:54:21 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-56
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 9:27:00 AM
Lab ID: 1808H79-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 1:54:21 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 1:54:21 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 1:54:21 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 1:54:21 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 1:54:21 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 1:54:21 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 1:54:21 PM	40131
Surr: 2-Fluorophenol	26.2	0	15-74.1		%Rec	1	9/12/2018 1:54:21 PM	40131
Surr: Phenol-d5	22.3	0	15-59.8		%Rec	1	9/12/2018 1:54:21 PM	40131
Surr: 2,4,6-Tribromophenol	57.9	0	22.1-112		%Rec	1	9/12/2018 1:54:21 PM	40131
Surr: Nitrobenzene-d5	44.8	0	33.2-94		%Rec	1	9/12/2018 1:54:21 PM	40131
Surr: 2-Fluorobiphenyl	46.2	0	34-90.9		%Rec	1	9/12/2018 1:54:21 PM	40131
Surr: 4-Terphenyl-d14	79.6	0	15-149		%Rec	1	9/12/2018 1:54:21 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	29	1.2	2.5		mg/L	50	8/31/2018 3:04:01 PM	G53866
Surr: BFB	97.8	0	69.3-150		%Rec	50	8/31/2018 3:04:01 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	12000	35	200		µg/L	200	9/5/2018 8:47:00 PM	R53912
Toluene	41	3.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Ethylbenzene	570	4.5	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Methyl tert-butyl ether (MTBE)	120	6.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Naphthalene	120	5.8	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
1-Methylnaphthalene	86	6.7	80		µg/L	20	9/5/2018 9:11:00 PM	R53912
2-Methylnaphthalene	22	4.8	80	J	µg/L	20	9/5/2018 9:11:00 PM	R53912
Acetone	85	16	200	J	µg/L	20	9/5/2018 9:11:00 PM	R53912
Bromobenzene	ND	6.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Bromodichloromethane	ND	5.7	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Bromoform	ND	6.5	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Bromomethane	ND	5.1	60		µg/L	20	9/5/2018 9:11:00 PM	R53912
2-Butanone	ND	25	200		µg/L	20	9/5/2018 9:11:00 PM	R53912
Carbon disulfide	ND	7.7	200		µg/L	20	9/5/2018 9:11:00 PM	R53912
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Chlorobenzene	ND	5.8	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Chloroethane	ND	3.3	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
Chloroform	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Chloromethane	ND	5.9	60		µg/L	20	9/5/2018 9:11:00 PM	R53912
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
cis-1,2-DCE	ND	7.5	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
Dibromochloromethane	ND	4.7	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Dibromomethane	ND	6.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1-Dichloroethene	ND	2.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/5/2018 9:11:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Hexachlorobutadiene	ND	16	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
2-Hexanone	ND	18	200		µg/L	20	9/5/2018 9:11:00 PM	R53912
Isopropylbenzene	15	4.4	20	J	µg/L	20	9/5/2018 9:11:00 PM	R53912
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	9/5/2018 9:11:00 PM	R53912
Methylene Chloride	ND	4.1	60		µg/L	20	9/5/2018 9:11:00 PM	R53912
n-Butylbenzene	6.2	5.0	60	J	µg/L	20	9/5/2018 9:11:00 PM	R53912
n-Propylbenzene	45	4.9	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
sec-Butylbenzene	ND	4.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Styrene	ND	5.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/5/2018 9:11:00 PM	R53912
Vinyl chloride	ND	2.2	20		µg/L	20	9/5/2018 9:11:00 PM	R53912
Xylenes, Total	120	13	30		µg/L	20	9/5/2018 9:11:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	20	9/5/2018 9:11:00 PM	R53912
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	20	9/5/2018 9:11:00 PM	R53912
Surr: Dibromofluoromethane	102	0	70-130		%Rec	20	9/5/2018 9:11:00 PM	R53912
Surr: Toluene-d8	90.0	0	70-130		%Rec	20	9/5/2018 9:11:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.5	0.63	1.0		mg/L	1	9/4/2018 4:06:34 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 4:06:34 PM	40100
Surr: DNOP	118	0	76.7-135		%Rec	1	9/4/2018 4:06:34 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 4:10:01 PM	R53843
Chloride	160	0.59	10		mg/L	20	8/30/2018 4:22:53 PM	R53843
Bromide	2.2	0.13	0.50		mg/L	5	8/30/2018 4:10:01 PM	R53843
Phosphorus, Orthophosphate (As P)	2.7	0.46	2.5	H	mg/L	5	8/30/2018 4:10:01 PM	R53843
Sulfate	1.2	1.0	2.5	J	mg/L	5	8/30/2018 4:10:01 PM	R53843
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/30/2018 6:18:39 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	3.9	0.0050	0.010	*	mg/L	5	9/13/2018 7:11:23 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:08:03 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:08:03 PM	40257
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 6:08:03 PM	40257
Iron	6.9	0.10	0.20	*	mg/L	10	9/13/2018 7:13:22 PM	40257
Manganese	2.5	0.0055	0.010	*	mg/L	5	9/13/2018 7:11:23 PM	40257
Silver	0.0031	0.0012	0.0050	J	mg/L	1	9/13/2018 6:08:03 PM	40257
Zinc	0.0073	0.0033	0.010	J	mg/L	1	9/13/2018 6:08:03 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0059	0.00041	0.0010		mg/L	1	9/12/2018 4:50:55 PM	40257
Lead	0.0017	0.00023	0.00050		mg/L	1	9/12/2018 4:50:55 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:50:55 PM	40257
Uranium	0.00056	0.000068	0.00050		mg/L	1	9/13/2018 5:41:27 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000068	0.000038	0.00020	J	mg/L	1	9/17/2018 5:06:12 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.6	0.0049	0.010	*	mg/L	5	9/18/2018 11:50:20 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:48:22 AM	A54217
Calcium	110	0.39	5.0		mg/L	5	9/18/2018 11:50:20 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:48:22 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:48:22 AM	A54217
Iron	3.3	0.082	0.10	*	mg/L	5	9/18/2018 11:50:20 AM	A54217
Magnesium	18	0.25	1.0		mg/L	1	9/18/2018 11:48:22 AM	A54217
Manganese	2.1	0.0020	0.010	*	mg/L	5	9/18/2018 11:50:20 AM	A54217
Potassium	0.68	0.11	1.0	J	mg/L	1	9/18/2018 11:48:22 AM	A54217
Silver	0.0028	0.0018	0.0050	J	mg/L	1	9/18/2018 11:48:22 AM	A54217
Sodium	270	0.82	5.0		mg/L	5	9/18/2018 11:50:20 AM	A54217
Zinc	0.013	0.0021	0.010		mg/L	1	9/18/2018 11:48:22 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0040	0.00042	0.0010		mg/L	1	9/5/2018 12:23:24 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 12:23:24 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 12:23:24 PM	B53936
Uranium	0.00042	0.000096	0.00050	J	mg/L	1	9/5/2018 12:23:24 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000070	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 5:08:24 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzoic acid	38	6.3	20		µg/L	1	9/12/2018 2:24:07 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-57
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 10:55:00 AM
Lab ID: 1808H79-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 2:24:07 PM	40131
1-Methylnaphthalene	89	7.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Methylnaphthalene	16	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 2:24:07 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 2:24:07 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Naphthalene	73	5.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 2:24:07 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 2:24:07 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Phenol	68	6.0	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 2:24:07 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 2:24:07 PM	40131
Surr: 2-Fluorophenol	44.7	0	15-74.1		%Rec	1	9/12/2018 2:24:07 PM	40131
Surr: Phenol-d5	40.4	0	15-59.8		%Rec	1	9/12/2018 2:24:07 PM	40131
Surr: 2,4,6-Tribromophenol	70.7	0	22.1-112		%Rec	1	9/12/2018 2:24:07 PM	40131
Surr: Nitrobenzene-d5	68.6	0	33.2-94		%Rec	1	9/12/2018 2:24:07 PM	40131
Surr: 2-Fluorobiphenyl	64.6	0	34-90.9		%Rec	1	9/12/2018 2:24:07 PM	40131
Surr: 4-Terphenyl-d14	93.9	0	15-149		%Rec	1	9/12/2018 2:24:07 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:15:00 AM
Lab ID: 1808H79-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 3:27:31 PM	G53866
Surr: BFB	96.3	0	69.3-150		%Rec	1	8/31/2018 3:27:31 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.60	0.17	1.0	J	µg/L	1	9/5/2018 9:35:00 PM	R53912
Toluene	ND	0.17	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Naphthalene	ND	0.29	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Acetone	5.0	0.79	10	J	µg/L	1	9/5/2018 9:35:00 PM	R53912
Bromobenzene	ND	0.32	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Bromoform	ND	0.32	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Bromomethane	ND	0.26	3.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
2-Butanone	ND	1.3	10		µg/L	1	9/5/2018 9:35:00 PM	R53912
Carbon disulfide	ND	0.39	10		µg/L	1	9/5/2018 9:35:00 PM	R53912
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Chloroethane	ND	0.16	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Chloroform	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Chloromethane	ND	0.29	3.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Dibromomethane	ND	0.32	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:15:00 AM
Lab ID: 1808H79-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
2-Hexanone	ND	0.91	10		µg/L	1	9/5/2018 9:35:00 PM	R53912
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/5/2018 9:35:00 PM	R53912
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Styrene	ND	0.25	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/5/2018 9:35:00 PM	R53912
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/5/2018 9:35:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	9/5/2018 9:35:00 PM	R53912
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/5/2018 9:35:00 PM	R53912
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/5/2018 9:35:00 PM	R53912
Surr: Toluene-d8	91.0	0	70-130		%Rec	1	9/5/2018 9:35:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:15:00 AM
Lab ID: 1808H79-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 4:31:14 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 4:31:14 PM	40100
Surr: DNOP	117	0	76.7-135		%Rec	1	9/4/2018 4:31:14 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:30:00 AM
Lab ID: 1808H79-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 3:50:58 PM	G53866
Surr: BFB	96.9	0	69.3-150		%Rec	1	8/31/2018 3:50:58 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.21	0.17	1.0	J	µg/L	1	9/5/2018 9:58:00 PM	R53912
Toluene	ND	0.17	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Naphthalene	ND	0.29	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Acetone	ND	0.79	10		µg/L	1	9/5/2018 9:58:00 PM	R53912
Bromobenzene	ND	0.32	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Bromoform	ND	0.32	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Bromomethane	ND	0.26	3.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
2-Butanone	ND	1.3	10		µg/L	1	9/5/2018 9:58:00 PM	R53912
Carbon disulfide	ND	0.39	10		µg/L	1	9/5/2018 9:58:00 PM	R53912
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Chloroethane	ND	0.16	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Chloroform	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Chloromethane	ND	0.29	3.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Dibromomethane	ND	0.32	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:30:00 AM
Lab ID: 1808H79-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
2-Hexanone	ND	0.91	10		µg/L	1	9/5/2018 9:58:00 PM	R53912
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/5/2018 9:58:00 PM	R53912
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Styrene	ND	0.25	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/5/2018 9:58:00 PM	R53912
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/5/2018 9:58:00 PM	R53912
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	9/5/2018 9:58:00 PM	R53912
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	9/5/2018 9:58:00 PM	R53912
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/5/2018 9:58:00 PM	R53912
Surr: Toluene-d8	90.5	0	70-130		%Rec	1	9/5/2018 9:58:00 PM	R53912

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 11:30:00 AM
Lab ID: 1808H79-008B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 4:55:43 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 4:55:43 PM	40100
Surr: DNOP	112	0	76.7-135		%Rec	1	9/4/2018 4:55:43 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 12:05:00 PM
Lab ID: 1808H79-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	130	2.4	5.0		mg/L	100	8/31/2018 4:14:25 PM	G53866
Surr: BFB	96.6	0	69.3-150		%Rec	100	8/31/2018 4:14:25 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	48000	170	1000		µg/L	1E+	9/6/2018 12:39:00 PM	R54051
Toluene	4000	17	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Ethylbenzene	1500	22	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Methyl tert-butyl ether (MTBE)	1100	32	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2,4-Trimethylbenzene	310	25	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,3,5-Trimethylbenzene	43	23	100	J	µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Naphthalene	100	29	200	J	µg/L	100	9/6/2018 1:03:00 PM	R54051
1-Methylnaphthalene	40	34	400	J	µg/L	100	9/6/2018 1:03:00 PM	R54051
2-Methylnaphthalene	ND	24	400		µg/L	100	9/6/2018 1:03:00 PM	R54051
Acetone	ND	79	1000		µg/L	100	9/6/2018 1:03:00 PM	R54051
Bromobenzene	ND	32	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Bromodichloromethane	ND	28	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Bromoform	ND	32	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Bromomethane	ND	26	300		µg/L	100	9/6/2018 1:03:00 PM	R54051
2-Butanone	ND	130	1000		µg/L	100	9/6/2018 1:03:00 PM	R54051
Carbon disulfide	ND	39	1000		µg/L	100	9/6/2018 1:03:00 PM	R54051
Carbon Tetrachloride	ND	13	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Chlorobenzene	ND	29	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Chloroethane	ND	16	200		µg/L	100	9/6/2018 1:03:00 PM	R54051
Chloroform	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Chloromethane	ND	29	300		µg/L	100	9/6/2018 1:03:00 PM	R54051
2-Chlorotoluene	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
4-Chlorotoluene	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
cis-1,2-DCE	ND	38	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	9/6/2018 1:03:00 PM	R54051
Dibromochloromethane	ND	24	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Dibromomethane	ND	32	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2-Dichlorobenzene	ND	31	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,3-Dichlorobenzene	ND	31	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,4-Dichlorobenzene	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Dichlorodifluoromethane	ND	100	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1-Dichloroethane	ND	40	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1-Dichloroethene	ND	12	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2-Dichloropropane	ND	15	100		µg/L	100	9/6/2018 1:03:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 12:05:00 PM
Lab ID: 1808H79-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	27	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
2,2-Dichloropropane	ND	18	200		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1-Dichloropropene	ND	16	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Hexachlorobutadiene	ND	80	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
2-Hexanone	ND	91	1000		µg/L	100	9/6/2018 1:03:00 PM	R54051
Isopropylbenzene	24	22	100	J	µg/L	100	9/6/2018 1:03:00 PM	R54051
4-Isopropyltoluene	ND	24	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
4-Methyl-2-pentanone	ND	45	1000		µg/L	100	9/6/2018 1:03:00 PM	R54051
Methylene Chloride	ND	21	300		µg/L	100	9/6/2018 1:03:00 PM	R54051
n-Butylbenzene	ND	25	300		µg/L	100	9/6/2018 1:03:00 PM	R54051
n-Propylbenzene	56	24	100	J	µg/L	100	9/6/2018 1:03:00 PM	R54051
sec-Butylbenzene	ND	20	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Styrene	ND	25	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
tert-Butylbenzene	ND	22	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	9/6/2018 1:03:00 PM	R54051
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
trans-1,2-DCE	ND	18	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1,1-Trichloroethane	ND	15	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,1,2-Trichloroethane	ND	23	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Trichloroethene (TCE)	ND	26	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Trichlorofluoromethane	ND	17	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
1,2,3-Trichloropropane	ND	57	200		µg/L	100	9/6/2018 1:03:00 PM	R54051
Vinyl chloride	ND	11	100		µg/L	100	9/6/2018 1:03:00 PM	R54051
Xylenes, Total	3800	64	150		µg/L	100	9/6/2018 1:03:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	100	9/6/2018 1:03:00 PM	R54051
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	100	9/6/2018 1:03:00 PM	R54051
Surr: Dibromofluoromethane	106	0	70-130		%Rec	100	9/6/2018 1:03:00 PM	R54051
Surr: Toluene-d8	92.1	0	70-130		%Rec	100	9/6/2018 1:03:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: RW-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 12:05:00 PM
Lab ID: 1808H79-009B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.2	0.63	1.0		mg/L	1	9/4/2018 5:44:52 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 5:44:52 PM	40100
Surr: DNOP	120	0	76.7-135		%Rec	1	9/4/2018 5:44:52 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	92	1.2	2.5		mg/L	50	8/31/2018 4:37:54 PM	G53866
Surr: BFB	100	0	69.3-150		%Rec	50	8/31/2018 4:37:54 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	38000	87	500		µg/L	500	9/6/2018 1:27:00 PM	R54051
Toluene	97	8.4	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Ethylbenzene	1200	11	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Methyl tert-butyl ether (MTBE)	2900	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2,4-Trimethylbenzene	28	13	50	J	µg/L	50	9/6/2018 1:51:00 PM	R54051
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Naphthalene	150	14	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
1-Methylnaphthalene	59	17	200	J	µg/L	50	9/6/2018 1:51:00 PM	R54051
2-Methylnaphthalene	45	12	200	J	µg/L	50	9/6/2018 1:51:00 PM	R54051
Acetone	ND	39	500		µg/L	50	9/6/2018 1:51:00 PM	R54051
Bromobenzene	ND	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Bromodichloromethane	ND	14	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Bromoform	ND	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Bromomethane	ND	13	150		µg/L	50	9/6/2018 1:51:00 PM	R54051
2-Butanone	ND	63	500		µg/L	50	9/6/2018 1:51:00 PM	R54051
Carbon disulfide	ND	19	500		µg/L	50	9/6/2018 1:51:00 PM	R54051
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Chlorobenzene	ND	15	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Chloroethane	ND	8.2	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
Chloroform	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Chloromethane	ND	15	150		µg/L	50	9/6/2018 1:51:00 PM	R54051
2-Chlorotoluene	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
4-Chlorotoluene	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
cis-1,2-DCE	ND	19	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
Dibromochloromethane	ND	12	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Dibromomethane	ND	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1-Dichloroethane	ND	20	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/6/2018 1:51:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Hexachlorobutadiene	ND	40	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
2-Hexanone	ND	45	500		µg/L	50	9/6/2018 1:51:00 PM	R54051
Isopropylbenzene	32	11	50	J	µg/L	50	9/6/2018 1:51:00 PM	R54051
4-Isopropyltoluene	ND	12	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/6/2018 1:51:00 PM	R54051
Methylene Chloride	ND	10	150		µg/L	50	9/6/2018 1:51:00 PM	R54051
n-Butylbenzene	ND	12	150		µg/L	50	9/6/2018 1:51:00 PM	R54051
n-Propylbenzene	98	12	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
sec-Butylbenzene	ND	10	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Styrene	ND	13	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
tert-Butylbenzene	ND	11	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/6/2018 1:51:00 PM	R54051
Vinyl chloride	ND	5.5	50		µg/L	50	9/6/2018 1:51:00 PM	R54051
Xylenes, Total	190	32	75		µg/L	50	9/6/2018 1:51:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	50	9/6/2018 1:51:00 PM	R54051
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	50	9/6/2018 1:51:00 PM	R54051
Surr: Dibromofluoromethane	106	0	70-130		%Rec	50	9/6/2018 1:51:00 PM	R54051
Surr: Toluene-d8	92.6	0	70-130		%Rec	50	9/6/2018 1:51:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	5.6	0.63	1.0		mg/L	1	9/4/2018 6:09:26 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 6:09:26 PM	40100
Surr: DNOP	123	0	76.7-135		%Rec	1	9/4/2018 6:09:26 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 12:18:29 PM	R53843
Chloride	160	0.59	10		mg/L	20	8/30/2018 12:31:20 PM	R53843
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/30/2018 12:18:29 PM	R53843
Bromide	1.8	0.13	0.50		mg/L	5	8/30/2018 12:18:29 PM	R53843
Nitrogen, Nitrate (As N)	0.070	0.033	0.50	J	mg/L	5	8/30/2018 12:18:29 PM	R53843
Phosphorus, Orthophosphate (As P)	3.4	0.46	2.5		mg/L	5	8/30/2018 12:18:29 PM	R53843
Sulfate	ND	1.0	2.5		mg/L	5	8/30/2018 12:18:29 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.0	0.0050	0.010	*	mg/L	5	9/13/2018 7:15:25 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:10:01 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:10:01 PM	40257
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 6:10:01 PM	40257
Iron	8.0	0.10	0.20	*	mg/L	10	9/13/2018 7:17:23 PM	40257
Manganese	1.9	0.0055	0.010	*	mg/L	5	9/13/2018 7:15:25 PM	40257
Silver	0.0027	0.0012	0.0050	J	mg/L	1	9/13/2018 6:10:01 PM	40257
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 6:10:01 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0036	0.00041	0.0010		mg/L	1	9/12/2018 4:53:14 PM	40257
Lead	ND	0.00023	0.00050		mg/L	1	9/12/2018 4:53:14 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:53:14 PM	40257
Uranium	0.00017	0.000068	0.00050	J	mg/L	1	9/13/2018 5:43:44 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000069	0.000038	0.00020	J	mg/L	1	9/17/2018 5:10:36 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.8	0.0049	0.010	*	mg/L	5	9/18/2018 11:54:21 AM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:52:23 AM	A54217
Calcium	130	0.39	5.0		mg/L	5	9/18/2018 11:54:21 AM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:52:23 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:52:23 AM	A54217
Iron	7.4	0.16	0.20	*	mg/L	10	9/18/2018 3:04:26 PM	A54217
Magnesium	36	0.25	1.0		mg/L	1	9/18/2018 11:52:23 AM	A54217
Manganese	1.9	0.0020	0.010	*	mg/L	5	9/18/2018 11:54:21 AM	A54217
Potassium	0.28	0.11	1.0	J	mg/L	1	9/18/2018 11:52:23 AM	A54217
Silver	0.0026	0.0018	0.0050	J	mg/L	1	9/18/2018 11:52:23 AM	A54217
Sodium	260	0.82	5.0		mg/L	5	9/18/2018 11:54:21 AM	A54217
Zinc	0.013	0.0021	0.010		mg/L	1	9/18/2018 11:52:23 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0028	0.00042	0.0010		mg/L	1	9/5/2018 12:25:46 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 12:25:46 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 12:25:46 PM	B53936
Uranium	0.00017	0.000096	0.00050	J	mg/L	1	9/5/2018 12:25:46 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000057	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 5:12:49 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzoic acid	23	6.3	20		µg/L	1	9/12/2018 2:53:46 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-58
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 1:00:00 PM
Lab ID: 1808H79-010F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 2:53:46 PM	40131
1-Methylnaphthalene	74	7.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Methylnaphthalene	53	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 2:53:46 PM	40131
3+4-Methylphenol	5.4	5.4	10	J	µg/L	1	9/12/2018 2:53:46 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 2:53:46 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Naphthalene	110	5.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 2:53:46 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 2:53:46 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Phenol	52	6.0	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 2:53:46 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 2:53:46 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 2:53:46 PM	40131
Surr: 2-Fluorophenol	35.0	0	15-74.1		%Rec	1	9/12/2018 2:53:46 PM	40131
Surr: Phenol-d5	40.7	0	15-59.8		%Rec	1	9/12/2018 2:53:46 PM	40131
Surr: 2,4,6-Tribromophenol	64.6	0	22.1-112		%Rec	1	9/12/2018 2:53:46 PM	40131
Surr: Nitrobenzene-d5	62.4	0	33.2-94		%Rec	1	9/12/2018 2:53:46 PM	40131
Surr: 2-Fluorobiphenyl	64.2	0	34-90.9		%Rec	1	9/12/2018 2:53:46 PM	40131
Surr: 4-Terphenyl-d14	92.6	0	15-149		%Rec	1	9/12/2018 2:53:46 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	78	1.2	2.5		mg/L	50	8/31/2018 5:01:21 PM	G53866
Surr: BFB	114	0	69.3-150		%Rec	50	8/31/2018 5:01:21 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	17000	87	500		µg/L	500	9/6/2018 2:15:00 PM	R54051
Toluene	4600	84	500		µg/L	500	9/6/2018 2:15:00 PM	R54051
Ethylbenzene	1800	11	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Methyl tert-butyl ether (MTBE)	140	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2,4-Trimethylbenzene	710	13	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,3,5-Trimethylbenzene	200	12	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Naphthalene	85	14	100	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
1-Methylnaphthalene	19	17	200	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
2-Methylnaphthalene	24	12	200	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
Acetone	ND	39	500		µg/L	50	9/6/2018 2:39:00 PM	R54051
Bromobenzene	ND	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Bromodichloromethane	ND	14	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Bromoform	ND	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Bromomethane	ND	13	150		µg/L	50	9/6/2018 2:39:00 PM	R54051
2-Butanone	ND	63	500		µg/L	50	9/6/2018 2:39:00 PM	R54051
Carbon disulfide	ND	19	500		µg/L	50	9/6/2018 2:39:00 PM	R54051
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Chlorobenzene	ND	15	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Chloroethane	25	8.2	100	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
Chloroform	ND	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Chloromethane	ND	15	150		µg/L	50	9/6/2018 2:39:00 PM	R54051
2-Chlorotoluene	ND	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
4-Chlorotoluene	ND	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
cis-1,2-DCE	ND	19	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/6/2018 2:39:00 PM	R54051
Dibromochloromethane	ND	12	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Dibromomethane	ND	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1-Dichloroethane	76	20	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/6/2018 2:39:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Hexachlorobutadiene	ND	40	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
2-Hexanone	ND	45	500		µg/L	50	9/6/2018 2:39:00 PM	R54051
Isopropylbenzene	97	11	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
4-Isopropyltoluene	15	12	50	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/6/2018 2:39:00 PM	R54051
Methylene Chloride	ND	10	150		µg/L	50	9/6/2018 2:39:00 PM	R54051
n-Butylbenzene	19	12	150	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
n-Propylbenzene	160	12	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
sec-Butylbenzene	ND	10	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Styrene	ND	13	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
tert-Butylbenzene	ND	11	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/6/2018 2:39:00 PM	R54051
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/6/2018 2:39:00 PM	R54051
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/6/2018 2:39:00 PM	R54051
Vinyl chloride	21	5.5	50	J	µg/L	50	9/6/2018 2:39:00 PM	R54051
Xylenes, Total	5800	32	75		µg/L	50	9/6/2018 2:39:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	50	9/6/2018 2:39:00 PM	R54051
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	50	9/6/2018 2:39:00 PM	R54051
Surr: Dibromofluoromethane	101	0	70-130		%Rec	50	9/6/2018 2:39:00 PM	R54051
Surr: Toluene-d8	93.0	0	70-130		%Rec	50	9/6/2018 2:39:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.7	0.63	1.0		mg/L	1	9/4/2018 6:33:49 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 6:33:49 PM	40100
Surr: DNOP	120	0	76.7-135		%Rec	1	9/4/2018 6:33:49 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.59	2.0		mg/L	20	8/30/2018 12:57:04 PM	R53843
Chloride	6400	180	500		mg/L	1E+	9/18/2018 7:46:55 PM	R54228
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	8/30/2018 12:57:04 PM	R53843
Bromide	0.97	0.13	0.50		mg/L	5	8/30/2018 12:44:12 PM	R53843
Nitrogen, Nitrate (As N)	ND	0.13	2.0		mg/L	20	8/30/2018 12:57:04 PM	R53843
Phosphorus, Orthophosphate (As P)	8.4	1.9	10	J	mg/L	20	8/30/2018 12:57:04 PM	R53843
Sulfate	1.5	1.0	2.5	J	mg/L	5	8/30/2018 12:44:12 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	26	0.050	0.10	*	mg/L	50	9/13/2018 7:19:26 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:18:34 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:18:34 PM	40257
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 6:18:34 PM	40257
Iron	36	0.51	1.0	*	mg/L	50	9/13/2018 7:19:26 PM	40257
Manganese	13	0.055	0.10	*	mg/L	50	9/13/2018 7:19:26 PM	40257
Silver	0.019	0.0012	0.0050		mg/L	1	9/13/2018 6:18:34 PM	40257
Zinc	0.0045	0.0033	0.010	J	mg/L	1	9/13/2018 6:18:34 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0035	0.0021	0.0050	J	mg/L	5	9/12/2018 6:31:34 PM	40257
Lead	ND	0.0011	0.0025		mg/L	5	9/12/2018 6:31:34 PM	40257
Selenium	ND	0.0049	0.0050		mg/L	5	9/12/2018 6:31:34 PM	40257
Uranium	ND	0.00034	0.0025		mg/L	5	9/12/2018 6:31:34 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000062	0.000038	0.00020	J	mg/L	1	9/17/2018 5:19:40 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	26	0.049	0.10	*	mg/L	50	9/18/2018 3:08:39 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 11:56:19 AM	A54217
Calcium	1100	1.6	20		mg/L	20	9/18/2018 3:06:29 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 11:56:19 AM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 11:56:19 AM	A54217
Iron	36	0.82	1.0	*	mg/L	50	9/18/2018 3:08:39 PM	A54217
Magnesium	300	1.2	5.0		mg/L	5	9/18/2018 11:58:26 AM	A54217
Manganese	14	0.0078	0.040	*	mg/L	20	9/18/2018 3:06:29 PM	A54217
Potassium	3.7	0.11	1.0		mg/L	1	9/18/2018 11:56:19 AM	A54217
Silver	0.020	0.0018	0.0050		mg/L	1	9/18/2018 11:56:19 AM	A54217
Sodium	2600	8.2	50		mg/L	50	9/18/2018 3:08:39 PM	A54217
Zinc	0.0096	0.0021	0.010	J	mg/L	1	9/18/2018 11:56:19 AM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0055	0.0021	0.0050		mg/L	5	9/5/2018 12:28:09 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 12:28:09 PM	B53936
Selenium	ND	0.0038	0.0050		mg/L	5	9/5/2018 12:28:09 PM	B53936
Uranium	ND	0.00048	0.0025		mg/L	5	9/5/2018 12:28:09 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000064	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 5:21:53 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzoic acid	ND	6.3	20		µg/L	1	9/12/2018 3:23:16 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4-Dimethylphenol	59	5.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 2:50:00 PM
Lab ID: 1808H79-011F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 3:23:16 PM	40131
1-Methylnaphthalene	14	7.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Methylnaphthalene	14	6.3	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Methylphenol	370	13	20		µg/L	2	9/18/2018 4:09:41 PM	40131
3+4-Methylphenol	170	5.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 3:23:16 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Naphthalene	50	5.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 3:23:16 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 3:23:16 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Phenol	440	12	20		µg/L	2	9/18/2018 4:09:41 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 3:23:16 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 3:23:16 PM	40131
Surr: 2-Fluorophenol	1.04	0	15-74.1	S	%Rec	1	9/12/2018 3:23:16 PM	40131
Surr: Phenol-d5	37.4	0	15-59.8		%Rec	1	9/12/2018 3:23:16 PM	40131
Surr: 2,4,6-Tribromophenol	59.9	0	22.1-112		%Rec	1	9/12/2018 3:23:16 PM	40131
Surr: Nitrobenzene-d5	61.3	0	33.2-94		%Rec	1	9/12/2018 3:23:16 PM	40131
Surr: 2-Fluorobiphenyl	62.2	0	34-90.9		%Rec	1	9/12/2018 3:23:16 PM	40131
Surr: 4-Terphenyl-d14	94.4	0	15-149		%Rec	1	9/12/2018 3:23:16 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.70	0.024	0.050		mg/L	1	8/31/2018 5:24:44 PM	G53866
Surr: BFB	96.2	0	69.3-150		%Rec	1	8/31/2018 5:24:44 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.76	0.35	2.0	J	µg/L	2	9/6/2018 3:27:00 PM	R54051
Toluene	ND	0.34	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Ethylbenzene	ND	0.45	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Methyl tert-butyl ether (MTBE)	780	3.2	10		µg/L	10	9/6/2018 3:03:00 PM	R54051
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2-Dichloroethane (EDC)	19	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Naphthalene	ND	0.58	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
2-Methylnaphthalene	ND	0.48	8.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Acetone	ND	1.6	20		µg/L	2	9/6/2018 3:27:00 PM	R54051
Bromobenzene	ND	0.64	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Bromodichloromethane	ND	0.57	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Bromoform	ND	0.65	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Bromomethane	ND	0.51	6.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
2-Butanone	ND	2.5	20		µg/L	2	9/6/2018 3:27:00 PM	R54051
Carbon disulfide	ND	0.77	20		µg/L	2	9/6/2018 3:27:00 PM	R54051
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Chlorobenzene	ND	0.58	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Chloroethane	ND	0.33	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Chloroform	ND	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Chloromethane	ND	0.59	6.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
cis-1,2-DCE	1.8	0.75	2.0	J	µg/L	2	9/6/2018 3:27:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Dibromochloromethane	ND	0.47	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Dibromomethane	ND	0.64	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1-Dichloroethane	17	0.80	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1-Dichloroethene	26	0.24	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2-Dichloropropane	ND	0.31	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
2,2-Dichloropropane	ND	0.37	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1-Dichloropropene	ND	0.32	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
2-Hexanone	ND	1.8	20		µg/L	2	9/6/2018 3:27:00 PM	R54051
Isopropylbenzene	ND	0.44	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	9/6/2018 3:27:00 PM	R54051
Methylene Chloride	ND	0.41	6.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
n-Butylbenzene	ND	0.50	6.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
n-Propylbenzene	ND	0.49	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
sec-Butylbenzene	0.66	0.40	2.0	J	µg/L	2	9/6/2018 3:27:00 PM	R54051
Styrene	ND	0.50	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1,1-Trichloroethane	ND	0.31	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,1,2-Trichloroethane	1.1	0.47	2.0	J	µg/L	2	9/6/2018 3:27:00 PM	R54051
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Trichlorofluoromethane	ND	0.34	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Vinyl chloride	ND	0.22	2.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Xylenes, Total	ND	1.3	3.0		µg/L	2	9/6/2018 3:27:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	2	9/6/2018 3:27:00 PM	R54051
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	2	9/6/2018 3:27:00 PM	R54051
Surr: Dibromofluoromethane	106	0	70-130		%Rec	2	9/6/2018 3:27:00 PM	R54051
Surr: Toluene-d8	91.9	0	70-130		%Rec	2	9/6/2018 3:27:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 6:58:23 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 6:58:23 PM	40100
Surr: DNOP	119	0	76.7-135		%Rec	1	9/4/2018 6:58:23 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.15	0.50		mg/L	5	8/30/2018 1:09:56 PM	R53843
Chloride	440	9.1	25		mg/L	50	9/17/2018 2:57:54 PM	R54214
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/30/2018 1:09:56 PM	R53843
Bromide	1.2	0.13	0.50		mg/L	5	8/30/2018 1:09:56 PM	R53843
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/30/2018 1:09:56 PM	R53843
Phosphorus, Orthophosphate (As P)	1.9	0.46	2.5	J	mg/L	5	8/30/2018 1:09:56 PM	R53843
Sulfate	94	1.0	2.5		mg/L	5	8/30/2018 1:09:56 PM	R53843

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.12	0.0010	0.0020		mg/L	1	9/13/2018 6:20:41 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 6:20:41 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 6:20:41 PM	40257
Copper	0.0083	0.0041	0.0060		mg/L	1	9/13/2018 6:20:41 PM	40257
Iron	2.9	0.051	0.10	*	mg/L	5	9/13/2018 7:21:35 PM	40257
Manganese	0.11	0.0011	0.0020	*	mg/L	1	9/13/2018 6:20:41 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 6:20:41 PM	40257
Zinc	0.014	0.0033	0.010		mg/L	1	9/13/2018 6:20:41 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0032	0.00041	0.0010		mg/L	1	9/12/2018 4:57:49 PM	40257
Lead	0.0023	0.00023	0.00050		mg/L	1	9/12/2018 4:57:49 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 4:57:49 PM	40257
Uranium	0.055	0.00034	0.0025	*	mg/L	5	9/13/2018 5:46:02 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000083	0.000038	0.00020	J	mg/L	1	9/17/2018 5:24:08 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.051	0.00099	0.0020		mg/L	1	9/18/2018 12:00:27 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 12:00:27 PM	A54217
Calcium	28	0.078	1.0		mg/L	1	9/18/2018 12:00:27 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 12:00:27 PM	A54217
Copper	0.0045	0.0032	0.0060	J	mg/L	1	9/18/2018 12:00:27 PM	A54217
Iron	0.022	0.016	0.020		mg/L	1	9/18/2018 12:00:27 PM	A54217
Magnesium	5.3	0.25	1.0		mg/L	1	9/18/2018 12:00:27 PM	A54217
Manganese	0.037	0.00039	0.0020		mg/L	1	9/18/2018 12:00:27 PM	A54217
Potassium	0.63	0.11	1.0	J	mg/L	1	9/18/2018 12:00:27 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 12:00:27 PM	A54217
Sodium	610	1.6	10		mg/L	10	9/18/2018 3:10:48 PM	A54217
Zinc	0.0076	0.0021	0.010	J	mg/L	1	9/18/2018 12:00:27 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0025	0.00042	0.0010		mg/L	1	9/5/2018 2:13:38 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 2:13:38 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 2:13:38 PM	B53936
Uranium	0.055	0.00048	0.0025	*	mg/L	5	9/5/2018 12:30:33 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000069	0.000038	0.00020	JFiltered	mg/L	1	9/17/2018 5:26:41 PM	40384

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Benzoic acid	8.4	6.3	20	J	µg/L	1	9/12/2018 3:52:55 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 3:52:55 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 3:52:55 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 3:52:55 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 3:52:55 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 3:52:55 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 3:52:55 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 3:52:55 PM	40131
Surr: 2-Fluorophenol	39.3	0	15-74.1		%Rec	1	9/12/2018 3:52:55 PM	40131
Surr: Phenol-d5	33.1	0	15-59.8		%Rec	1	9/12/2018 3:52:55 PM	40131
Surr: 2,4,6-Tribromophenol	75.0	0	22.1-112		%Rec	1	9/12/2018 3:52:55 PM	40131
Surr: Nitrobenzene-d5	54.3	0	33.2-94		%Rec	1	9/12/2018 3:52:55 PM	40131
Surr: 2-Fluorobiphenyl	57.7	0	34-90.9		%Rec	1	9/12/2018 3:52:55 PM	40131
Surr: 4-Terphenyl-d14	93.2	0	15-149		%Rec	1	9/12/2018 3:52:55 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-32
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018 4:35:00 PM
Lab ID: 1808H79-012G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 4:47:17 PM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018
Lab ID: 1808H79-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	130	2.4	5.0		mg/L	100	8/31/2018 5:48:06 PM	G53866
Surr: BFB	96.7	0	69.3-150		%Rec	100	8/31/2018 5:48:06 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	48000	170	1000		µg/L	1E+	9/6/2018 3:51:00 PM	R54051
Toluene	4000	17	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Ethylbenzene	1400	22	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Methyl tert-butyl ether (MTBE)	1200	32	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2,4-Trimethylbenzene	290	25	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,3,5-Trimethylbenzene	40	23	100	J	µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Naphthalene	99	29	200	J	µg/L	100	9/6/2018 4:16:00 PM	R54051
1-Methylnaphthalene	40	34	400	J	µg/L	100	9/6/2018 4:16:00 PM	R54051
2-Methylnaphthalene	ND	24	400		µg/L	100	9/6/2018 4:16:00 PM	R54051
Acetone	ND	79	1000		µg/L	100	9/6/2018 4:16:00 PM	R54051
Bromobenzene	ND	32	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Bromodichloromethane	ND	28	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Bromoform	ND	32	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Bromomethane	ND	26	300		µg/L	100	9/6/2018 4:16:00 PM	R54051
2-Butanone	ND	130	1000		µg/L	100	9/6/2018 4:16:00 PM	R54051
Carbon disulfide	ND	39	1000		µg/L	100	9/6/2018 4:16:00 PM	R54051
Carbon Tetrachloride	ND	13	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Chlorobenzene	ND	29	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Chloroethane	ND	16	200		µg/L	100	9/6/2018 4:16:00 PM	R54051
Chloroform	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Chloromethane	ND	29	300		µg/L	100	9/6/2018 4:16:00 PM	R54051
2-Chlorotoluene	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
4-Chlorotoluene	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
cis-1,2-DCE	ND	38	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	9/6/2018 4:16:00 PM	R54051
Dibromochloromethane	ND	24	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Dibromomethane	ND	32	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2-Dichlorobenzene	ND	31	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,3-Dichlorobenzene	ND	31	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,4-Dichlorobenzene	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Dichlorodifluoromethane	ND	100	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1-Dichloroethane	ND	40	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1-Dichloroethene	ND	12	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2-Dichloropropane	ND	15	100		µg/L	100	9/6/2018 4:16:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018
Lab ID: 1808H79-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	27	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
2,2-Dichloropropane	ND	18	200		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1-Dichloropropene	ND	16	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Hexachlorobutadiene	ND	80	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
2-Hexanone	ND	91	1000		µg/L	100	9/6/2018 4:16:00 PM	R54051
Isopropylbenzene	26	22	100	J	µg/L	100	9/6/2018 4:16:00 PM	R54051
4-Isopropyltoluene	ND	24	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
4-Methyl-2-pentanone	ND	45	1000		µg/L	100	9/6/2018 4:16:00 PM	R54051
Methylene Chloride	ND	21	300		µg/L	100	9/6/2018 4:16:00 PM	R54051
n-Butylbenzene	ND	25	300		µg/L	100	9/6/2018 4:16:00 PM	R54051
n-Propylbenzene	51	24	100	J	µg/L	100	9/6/2018 4:16:00 PM	R54051
sec-Butylbenzene	ND	20	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Styrene	ND	25	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
tert-Butylbenzene	ND	22	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	9/6/2018 4:16:00 PM	R54051
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
trans-1,2-DCE	ND	18	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1,1-Trichloroethane	ND	15	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,1,2-Trichloroethane	ND	23	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Trichloroethene (TCE)	ND	26	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Trichlorofluoromethane	ND	17	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
1,2,3-Trichloropropane	ND	57	200		µg/L	100	9/6/2018 4:16:00 PM	R54051
Vinyl chloride	ND	11	100		µg/L	100	9/6/2018 4:16:00 PM	R54051
Xylenes, Total	3700	64	150		µg/L	100	9/6/2018 4:16:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	100	9/6/2018 4:16:00 PM	R54051
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	100	9/6/2018 4:16:00 PM	R54051
Surr: Dibromofluoromethane	107	0	70-130		%Rec	100	9/6/2018 4:16:00 PM	R54051
Surr: Toluene-d8	91.3	0	70-130		%Rec	100	9/6/2018 4:16:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP07
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/28/2018
Lab ID: 1808H79-013B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	7.1	0.63	1.0		mg/L	1	9/4/2018 7:22:48 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 7:22:48 PM	40100
Surr: DNOP	121	0	76.7-135		%Rec	1	9/4/2018 7:22:48 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808H79-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 6:11:26 PM	G53866
Surr: BFB	94.7	0	69.3-150		%Rec	1	8/31/2018 6:11:26 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Toluene	ND	0.17	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Naphthalene	ND	0.29	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Acetone	ND	0.79	10		µg/L	1	9/6/2018 5:04:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
2-Butanone	ND	1.3	10		µg/L	1	9/6/2018 5:04:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 5:04:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808H79-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 5:04:00 PM	R54051
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/6/2018 5:04:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 5:04:00 PM	R54051
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/6/2018 5:04:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	9/6/2018 5:04:00 PM	R54051
Surr: 4-Bromofluorobenzene	99.5	0	70-130		%Rec	1	9/6/2018 5:04:00 PM	R54051
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	9/6/2018 5:04:00 PM	R54051
Surr: Toluene-d8	91.0	0	70-130		%Rec	1	9/6/2018 5:04:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0018	0.0020	0.002000	0	91.0	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.3	50	150			J
Copper	0.0069	0.0060	0.006000	0	116	50	150			
Iron	0.017	0.020	0.02000	0	83.1	50	150			J
Magnesium	0.48	1.0	0.5000	0	97.0	50	150			J
Manganese	0.0020	0.0020	0.002000	0	97.5	50	150			J
Potassium	0.42	1.0	0.5000	0	84.8	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Sodium	0.50	1.0	0.5000	0	101	50	150			J
Zinc	0.0058	0.010	0.005000	0	115	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Calcium	46	1.0	50.00	0	91.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.48	0.020	0.5000	0	96.0	85	115			
Magnesium	46	1.0	50.00	0	92.3	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Potassium	46	1.0	50.00	0	91.6	85	115			
Silver	0.096	0.0050	0.1000	0	96.0	85	115			
Sodium	48	1.0	50.00	0	95.8	85	115			
Zinc	0.49	0.010	0.5000	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808H79-001DMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**OW-60**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789803**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.09592	94.9	70	130			
Cadmium	0.52	0.0020	0.5000	0	103	70	130			
Chromium	0.48	0.0060	0.5000	0.006270	94.9	70	130			
Copper	0.54	0.0060	0.5000	0.006410	106	70	130			
Manganese	0.67	0.0020	0.5000	0.1881	96.1	70	130			
Silver	0.10	0.0050	0.1000	0.003060	96.5	70	130			
Zinc	0.51	0.010	0.5000	0.008060	99.7	70	130			

Sample ID	**1808H79-001DMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**OW-60**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789804**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.09592	94.0	70	130	0.776	20	
Cadmium	0.51	0.0020	0.5000	0	103	70	130	0.823	20	
Chromium	0.47	0.0060	0.5000	0.006270	93.7	70	130	1.24	20	
Copper	0.53	0.0060	0.5000	0.006410	105	70	130	0.836	20	
Manganese	0.66	0.0020	0.5000	0.1881	95.2	70	130	0.678	20	
Silver	0.096	0.0050	0.1000	0.003060	93.4	70	130	3.09	20	
Zinc	0.50	0.010	0.5000	0.008060	99.2	70	130	0.506	20	

Sample ID	**MB-40257**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789921**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	0.0052	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40257**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789922**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-40257**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789922**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	95.0	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0086	0.0060	0.006000	0	144	50	150			
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Silver	0.0050	0.0050	0.005000	0	99.8	50	150			J
Zinc	0.0072	0.010	0.005000	0	145	50	150			J

Sample ID	**LCS-40257**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40257**	RunNo:	**54126**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789923**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	105	85	115			
Cadmium	0.53	0.0020	0.5000	0	107	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.5	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780183** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.5	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.3	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780184** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40257**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788607**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-40257**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788611**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.011	0.00050	0.01250	0	86.8	85	115			

Sample ID	**MSLLLCS-40257**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788614**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.4	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	90.4	50	150			J

Sample ID	**1808H79-002DLLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**OW-59**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788662**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.034	0.0050	0.02500	0.006797	109	70	130			
Lead	0.012	0.0025	0.01250	0	97.0	70	130			
Selenium	0.026	0.0050	0.02500	0	105	70	130			

Sample ID	**1808H79-002DLLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**OW-59**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788663**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.034	0.0050	0.02500	0.006797	109	70	130	0.419	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**
26-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808H79-002DLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-59** Batch ID: **40257** RunNo: **54114**
Prep Date: **9/10/2018** Analysis Date: **9/12/2018** SeqNo: **1788663** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.012	0.0025	0.01250	0	96.4	70	130	0.712	20	
Selenium	0.026	0.0050	0.02500	0	105	70	130	0.376	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40384**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40384**			RunNo: **54212**					
Prep Date:	**9/17/2018**	Analysis Date: **9/17/2018**			SeqNo: **1792739**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000077	0.00020								J

Sample ID	**LCS-40384**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40384**			RunNo: **54212**					
Prep Date:	**9/17/2018**	Analysis Date: **9/17/2018**			SeqNo: **1792740**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.5	80	120			

Sample ID	**1808H79-001DMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**OW-60**	Batch ID: **40384**			RunNo: **54212**					
Prep Date:	**9/17/2018**	Analysis Date: **9/17/2018**			SeqNo: **1792747**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	.00009573	97.7	75	125			

Sample ID	**1808H79-001DMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**OW-60**	Batch ID: **40384**			RunNo: **54212**					
Prep Date:	**9/17/2018**	Analysis Date: **9/17/2018**			SeqNo: **1792749**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	.00009573	101	75	125	3.08	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53843**	RunNo: **53843**
Prep Date:	Analysis Date: **8/30/2018**	SeqNo: **1776525** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.10	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	0.025	0.10								J
Phosphorus, Orthophosphate (As P	0.18	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53843**	RunNo: **53843**
Prep Date:	Analysis Date: **8/30/2018**	SeqNo: **1776526** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.3	90	110			
Bromide	2.4	0.10	2.500	0	96.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.6	90	110			
Sulfate	9.5	0.50	10.00	0	94.6	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54214**	RunNo: **54214**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792855** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54214**	RunNo: **54214**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**
26-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54214**	RunNo: **54214**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792856** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.2	90	110			
Sulfate	9.3	0.50	10.00	0	93.4	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40109**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779112**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40109**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779113**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.085	0.010	0.1000	0	85.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40100**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		118	76.7	135			

Sample ID **LCS-40100**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778490** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	103	70	130			
Surr: DNOP	0.52		0.5000		103	76.7	135			

Sample ID **1808H79-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-60**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778492** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.5	1.0	5.000	0	130	82.8	143			
Surr: DNOP	0.57		0.5000		114	76.7	135			

Sample ID **1808H79-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-60**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778493** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.6	1.0	5.000	0	132	82.8	143	1.20	20	
Surr: DNOP	0.55		0.5000		111	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777397** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.1	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	79.5	127			
Surr: BFB	22		20.00		108	69.3	150			

Sample ID **1808H79-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	34	1.0	10.00	23.01	112	52.5	149			
Surr: BFB	470		400.0		118	69.3	150			

Sample ID **1808H79-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	1.0	10.00	23.01	105	52.5	149	1.99	20	
Surr: BFB	450		400.0		112	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1779919** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.3		10.00		93.1	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1779977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	0.51	10								J
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1779977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1779977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID **1808h79-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-60**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780320** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	60.5	137			
Toluene	20	1.0	20.00	0	97.8	70	130			
Chlorobenzene	20	1.0	20.00	0	97.8	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Sample ID **1808h79-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-60**	Batch ID: **R53912**	RunNo: **53912**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780321** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	60.5	137	3.65	20	
Toluene	18	1.0	20.00	0	92.2	70	130	5.82	20	
Chlorobenzene	18	1.0	20.00	0	91.5	70	130	6.64	20	
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130	5.62	20	
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130	2.84	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		108	70	130	0	0	
Surr: Toluene-d8	9.0		10.00		90.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785849** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	95.9	70	130			
Chlorobenzene	19	1.0	20.00	0	95.5	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40131**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788421** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.3	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	80.1	57	115			
2-Chlorophenol	140	10	200.0	0	68.9	43.4	112			
1,4-Dichlorobenzene	55	10	100.0	0	55.1	38	95.2			
2,4-Dinitrotoluene	62	10	100.0	0	62.3	55.1	96.7			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	55	112			
4-Nitrophenol	87	10	200.0	0	43.7	16.6	93			
Pentachlorophenol	130	20	200.0	0	66.7	43.2	104			
Phenol	82	10	200.0	0	40.8	21.3	85.7			
Pyrene	78	10	100.0	0	78.3	64.9	105			
1,2,4-Trichlorobenzene	65	10	100.0	0	64.8	42.6	107			
Surr: 2-Fluorophenol	98		200.0		49.0	15	74.1			
Surr: Phenol-d5	85		200.0		42.6	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		72.3	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		69.5	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		62.1	34	90.9			
Surr: 4-Terphenyl-d14	95		100.0		95.0	15	149			

Sample ID **lcsd-40131**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788422** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	73.3	55.1	104	11.5	34.9	
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	57	115	10.8	30.2	
2-Chlorophenol	150	10	200.0	0	72.6	43.4	112	5.19	49.5	
1,4-Dichlorobenzene	61	10	100.0	0	61.3	38	95.2	10.5	43.2	
2,4-Dinitrotoluene	74	10	100.0	0	74.4	55.1	96.7	17.7	49.9	
N-Nitrosodi-n-propylamine	91	10	100.0	0	90.7	55	112	5.00	42.1	
4-Nitrophenol	100	10	200.0	0	51.2	16.6	93	15.9	31.5	
Pentachlorophenol	160	20	200.0	0	78.2	43.2	104	15.9	52.5	
Phenol	86	10	200.0	0	42.8	21.3	85.7	4.69	54.4	
Pyrene	87	10	100.0	0	87.4	64.9	105	11.0	30.7	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.3	42.6	107	8.12	48.1	
Surr: 2-Fluorophenol	110		200.0		52.5	15	74.1	0	0	
Surr: Phenol-d5	88		200.0		44.2	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.4	22.1	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.2	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	72		100.0		72.5	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**lcsd-40131**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**40131**		RunNo:	**54109**				
Prep Date:	**9/4/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788422**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	100		100.0		104	15	149	0	0	

Sample ID	**mb-40131**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**40131**		RunNo:	**54109**				
Prep Date:	**9/4/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788423**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.7	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40131**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808H79**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40131**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	83		200.0		41.7	15	74.1			
Surr: Phenol-d5	69		200.0		34.3	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		70.3	22.1	112			
Surr: Nitrobenzene-d5	54		100.0		54.2	33.2	94			
Surr: 2-Fluorobiphenyl	53		100.0		53.2	34	90.9			
Surr: 4-Terphenyl-d14	93		100.0		93.2	15	149			

Sample ID **lcs-40466**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798877** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.2	15	74.1			
Surr: Phenol-d5	130		200.0		63.1	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.1	22.1	112			
Surr: Nitrobenzene-d5	70		100.0		70.0	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		69.5	34	90.9			
Surr: 4-Terphenyl-d14	85		100.0		85.5	15	149			

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	66		200.0		32.8	15	74.1			
Surr: Phenol-d5	89		200.0		44.5	15	59.8			
Surr: 2,4,6-Tribromophenol	75		200.0		37.6	22.1	112			
Surr: Nitrobenzene-d5	68		100.0		68.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	34	90.9			
Surr: 4-Terphenyl-d14	86		100.0		85.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808H79 RcptNo: 1

Received By: **Jazzmine Burkhead** 8/30/2018 8:30:00 AM

Completed By: **Anne Thorne** 8/30/2018 9:46:08 AM

Reviewed By: JAB 08/30/18 SU 8.31.18

Labeled by: AT-NO3 samples 08/30/18 — JAB 08/31/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: AT 9/18 JAB 08/31/18
(<2 or >12 unless noted)
Adjusted? No
Checked by: JAB 08/31/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 8/30/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			
2	2.3	Good	Yes			
3	2.1	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808H79 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	3.4	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.4 See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	0725	H_2O	OW-60	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber-1	Neat	001											X						
				250 ml Amber-1	Neat	001			X														
				250 ml Plastic-1	HNO_3	001												X					
				125 ml Plastic-1	HNO_3	001												X	X				
				125 ml Plastic-1	H_2SO_4	001													X				
				125 ml Plastic-1	Neat	001													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700				
Date:	Time:	Relinquished by:	Received by:	Date	Time
				08/30/18	08:30

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Cooler

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808479	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	0755	H_2O	OW-59	40ml VOA-5	HCl	002			X							X						
				1 Liter Amber -1	Neat	002											X						
				250 ml Amber-1	Neat	002			X														
				250 ml Plastic-1	HNO_3	002												X					
				125 ml Plastic-1	HNO_3	002												X	X				
				125 ml Plastic-1	H_2SO_4	002													X				
				125 ml Plastic-1	Neat	002													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:20
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Courier Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

JAB 08/30/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	0825	H_2O	OW-54	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	0855	H_2O	OW-55	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700				
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier	08/30/18	08:30

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	0927	H_2O	OW-56	40ml VOA-5	HCl	205			X							X						
				1 Liter Amber -1	Neat	205											X						
				250 ml Amber-1	Neat	205			X														
				250 ml Plastic-1	HNO_3	205												X					
				125 ml Plastic-1	HNO_3	205												X	X				
				125 ml Plastic-1	H_2SO_4	205													X				
				125 ml Plastic-1	Neat	205													X				

Date: 8/29/18 Time: 0700 Relinquished by: _____

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: 08/30/18 Time: 08:30

Received by: _____ Date: _____ Time: _____

Courier

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808479	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	1055	H_2O	OW-57	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat	-006											X						
				250 ml Amber-1	Neat	-006			X														
				250 ml Plastic-1	HNO_3	-006												X					
				125 ml Plastic-1	HNO_3	-006												X	X				
				125 ml Plastic-1	H_2SO_4	-006													X				
				125 ml Plastic-1	Neat	-006													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	0830
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808174	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
8/28/18	1115	H_2O	FB07	40 ML VOA-5	HCl	207			X							X						
↓	↓	↓	↓	250 ML AMBER-1	NEAT	207			X													

Date	Time	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Rubbles (Y or N)
8/28/18	1130	H_2O	EB07	40 ML VOA-5	HCl	008			X							X						
↓	↓	↓	↓	250 ML AMBER-1	NEAT	008			X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/29/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier Cooler #1 - 1.9 Cooler #3 - 2.1 Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808479	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	1205	H_2O	RW-2	40ml VOA-5	HCl	009			X							X						
↓	↓	↓	↓	250 ml Amber-1	Neat	289			X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700		Brittni Buckhal	08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Courier Cooler #1 - 1.9 Cooler #3 - 2.1 Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	1300	H_2O	OW-58	40ml VOA-5	HCl	210			X							X						
				1 Liter Amber -2	Neat	210											X						
				250 ml Amber-1	Neat	210			X														
				250 ml Plastic-1	HNO_3	210												X					
				125 ml Plastic-1	HNO_3	210												X	X				
				125 ml Plastic-1	H_2SO_4	210													X				
				125 ml Plastic-1	Neat	210													X				

Date: 8/29/18 Time: 0700 Relinquished by: _____

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date 08/30/18 Time 08:30

Received by: _____ Date _____ Time _____

Courier

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 - 2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	1450	H_2O	MKTF-15	40ml VOA-5	HCl	-011			X							X						
				1 Liter Amber - 1*	Neat	-011											X						
				250 ml Amber-1	Neat	-011			X													
				250 ml Plastic-1	HNO_3	-011												X				
				125 ml Plastic-1	HNO_3	-011												X	X			
				125 ml Plastic-1	H_2SO_4	-011													X			
				125 ml Plastic-1	Neat	-011													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 1.9 Cooler #3 -2.1

Cooler #2 - 2.3 Cooler #4 - 3.4

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush_____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808H79	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	1635	H_2O	MKTF-32	40ml VOA-5	HCl	2|2			X							X						
				40ml VOA-3	$Na_2S_2O_3$	2|2					X											
				1 Liter Amber -1	Neat	2|2											X					
				250 ml Amber-1	Neat	2|2			X													
				250 ml Plastic-1	HNO_3	2|2												X				
				125 ml Plastic-1	HNO_3	2|2												X	X			
				125 ml Plastic-1	H_2SO_4	2|2													X			
				125 ml Plastic-1	Neat	2|2													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler #1 -1.9 Cooler #3 - 2.1
Cooler #2 -2.3 Cooler #4 -3.4

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808179	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/28/18	—	H_2O	DUP 07	40ml VOA-5	HCl	013			X							X						
↓	↓	↓	↓	250 ml Amber-1	Neat	013			X													
8/28/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCl	014										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/29/18	0700			08/30/18	08:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Cooler #1 - 1.9 Cooler #3 - 2.1 Courier

Cooler #2 - 2.3 Cooler #4 - 3.4

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 25, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808I45

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/31/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 8:07:47 PM	G53866
Surr: BFB	91.8	0	69.3-150		%Rec	1	8/31/2018 8:07:47 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Toluene	ND	0.17	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Naphthalene	ND	0.29	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Acetone	ND	0.79	10		µg/L	1	9/6/2018 5:28:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
2-Butanone	ND	1.3	10		µg/L	1	9/6/2018 5:28:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 5:28:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 5:28:00 PM	R54051
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/6/2018 5:28:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 5:28:00 PM	R54051
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/6/2018 5:28:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	9/6/2018 5:28:00 PM	R54051
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	9/6/2018 5:28:00 PM	R54051
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	9/6/2018 5:28:00 PM	R54051
Surr: Toluene-d8	91.1	0	70-130		%Rec	1	9/6/2018 5:28:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 5:47:48 PM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 7:47:17 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 7:47:17 PM	40100
Surr: DNOP	121	0	76.7-135		%Rec	1	9/4/2018 7:47:17 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Acenaphthylene	ND	62	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Aniline	ND	62	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Anthracene	ND	57	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Azobenzene	ND	67	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benz(a)anthracene	ND	53	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzo(a)pyrene	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzo(b)fluoranthene	ND	71	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzo(k)fluoranthene	ND	64	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzoic acid	100	63	200	JD	µg/L	1	9/12/2018 4:22:30 PM	40131
Benzyl alcohol	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Butyl benzyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Carbazole	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Chloroaniline	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Chloronaphthalene	ND	61	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Chlorophenol	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Chrysene	ND	68	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Di-n-butyl phthalate	ND	68	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Di-n-octyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Dibenzofuran	ND	69	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
1,2-Dichlorobenzene	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
1,3-Dichlorobenzene	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
1,4-Dichlorobenzene	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Diethyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Dimethyl phthalate	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4-Dichlorophenol	ND	58	200	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4-Dimethylphenol	ND	59	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4-Dinitrophenol	ND	37	200	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4-Dinitrotoluene	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Fluoranthene	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Fluorene	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Hexachlorobenzene	ND	62	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Hexachlorobutadiene	ND	64	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Hexachloroethane	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Isophorone	ND	62	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
1-Methylnaphthalene	ND	70	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Methylnaphthalene	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Methylphenol	ND	63	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
3+4-Methylphenol	ND	54	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
N-Nitrosodimethylamine	ND	69	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Naphthalene	ND	50	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Nitroaniline	ND	59	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
3-Nitroaniline	ND	68	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Nitroaniline	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Nitrobenzene	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2-Nitrophenol	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
4-Nitrophenol	ND	56	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Pentachlorophenol	ND	53	200	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Phenanthrene	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Phenol	ND	60	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Pyrene	ND	65	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Pyridine	ND	54	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	1	9/12/2018 4:22:30 PM	40131
Surr: 2-Fluorophenol	42.5	0	15-74.1	D	%Rec	1	9/12/2018 4:22:30 PM	40131
Surr: Phenol-d5	34.0	0	15-59.8	D	%Rec	1	9/12/2018 4:22:30 PM	40131
Surr: 2,4,6-Tribromophenol	76.4	0	22.1-112	D	%Rec	1	9/12/2018 4:22:30 PM	40131
Surr: Nitrobenzene-d5	63.7	0	33.2-94	D	%Rec	1	9/12/2018 4:22:30 PM	40131
Surr: 2-Fluorobiphenyl	64.0	0	34-90.9	D	%Rec	1	9/12/2018 4:22:30 PM	40131
Surr: 4-Terphenyl-d14	103	0	15-149	D	%Rec	1	9/12/2018 4:22:30 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 1:37:51 PM	R53882
Chloride	0.12	0.029	0.50	J	mg/L	1	8/31/2018 1:37:51 PM	R53882
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 1:37:51 PM	R53882
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	8/31/2018 1:37:51 PM	R53882
Sulfate	ND	0.21	0.50		mg/L	1	8/31/2018 1:37:51 PM	R53882
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/31/2018 3:46:27 PM	R53882

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 7:23:26 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 7:23:26 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 7:23:26 PM	40257
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 7:23:26 PM	40257
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 7:23:26 PM	40257
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 7:23:26 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 7:23:26 PM	40257
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 7:23:26 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/12/2018 5:18:04 PM	40257
Lead	ND	0.00023	0.00050		mg/L	1	9/12/2018 5:18:04 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:18:04 PM	40257
Uranium	ND	0.000068	0.00050		mg/L	1	9/12/2018 5:18:04 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000076	0.000038	0.00020	J	mg/L	1	9/18/2018 11:16:56 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:30:00 AM
Lab ID: 1808I45-001G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/18/2018 1:05:05 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 1:05:05 PM	A54217
Calcium	ND	0.078	1.0		mg/L	1	9/18/2018 1:05:05 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 1:05:05 PM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 1:05:05 PM	A54217
Iron	ND	0.016	0.020		mg/L	1	9/18/2018 1:05:05 PM	A54217
Magnesium	ND	0.25	1.0		mg/L	1	9/18/2018 1:05:05 PM	A54217
Manganese	ND	0.00039	0.0020		mg/L	1	9/18/2018 1:05:05 PM	A54217
Potassium	ND	0.11	1.0		mg/L	1	9/18/2018 1:05:05 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 1:05:05 PM	A54217
Sodium	ND	0.16	1.0		mg/L	1	9/18/2018 1:05:05 PM	A54217
Zinc	0.011	0.0021	0.010		mg/L	1	9/18/2018 1:05:05 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/5/2018 12:44:54 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 12:44:54 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 12:44:54 PM	B53936
Uranium	ND	0.000096	0.00050		mg/L	1	9/5/2018 12:44:54 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000071	0.000038	0.00020	J	mg/L	1	9/18/2018 11:23:48 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 8:31:05 PM	G53866
Surr: BFB	94.2	0	69.3-150		%Rec	1	8/31/2018 8:31:05 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Toluene	ND	0.17	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Naphthalene	ND	0.29	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Acetone	ND	0.79	10		µg/L	1	9/6/2018 5:53:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
2-Butanone	ND	1.3	10		µg/L	1	9/6/2018 5:53:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 5:53:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 5:53:00 PM	R54051
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/6/2018 5:53:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 5:53:00 PM	R54051
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/6/2018 5:53:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	9/6/2018 5:53:00 PM	R54051
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/6/2018 5:53:00 PM	R54051
Surr: Dibromofluoromethane	111	0	70-130		%Rec	1	9/6/2018 5:53:00 PM	R54051
Surr: Toluene-d8	90.7	0	70-130		%Rec	1	9/6/2018 5:53:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/4/2018 6:48:14 PM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 8:11:41 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 8:11:41 PM	40100
Surr: DNOP	119	0	76.7-135		%Rec	1	9/4/2018 8:11:41 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Benzoic acid	6.4	6.3	20	J	µg/L	1	9/12/2018 4:52:15 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 4:52:15 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 4:52:15 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 4:52:15 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 4:52:15 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 4:52:15 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 4:52:15 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 4:52:15 PM	40131
Surr: 2-Fluorophenol	42.0	0	15-74.1		%Rec	1	9/12/2018 4:52:15 PM	40131
Surr: Phenol-d5	33.4	0	15-59.8		%Rec	1	9/12/2018 4:52:15 PM	40131
Surr: 2,4,6-Tribromophenol	55.4	0	22.1-112		%Rec	1	9/12/2018 4:52:15 PM	40131
Surr: Nitrobenzene-d5	54.4	0	33.2-94		%Rec	1	9/12/2018 4:52:15 PM	40131
Surr: 2-Fluorobiphenyl	53.1	0	34-90.9		%Rec	1	9/12/2018 4:52:15 PM	40131
Surr: 4-Terphenyl-d14	80.9	0	15-149		%Rec	1	9/12/2018 4:52:15 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 2:29:17 PM	R53882
Chloride	0.21	0.029	0.50	J	mg/L	1	8/31/2018 2:29:17 PM	R53882
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 2:29:17 PM	R53882
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	8/31/2018 2:29:17 PM	R53882
Sulfate	ND	0.21	0.50		mg/L	1	8/31/2018 2:29:17 PM	R53882
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/31/2018 3:59:20 PM	R53882

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 7:27:51 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 7:27:51 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 7:27:51 PM	40257
Copper	0.0047	0.0041	0.0060	J	mg/L	1	9/13/2018 7:27:51 PM	40257
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 7:27:51 PM	40257
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 7:27:51 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 7:27:51 PM	40257
Zinc	0.0034	0.0033	0.010	J	mg/L	1	9/13/2018 7:27:51 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/12/2018 5:20:21 PM	40257
Lead	ND	0.00023	0.00050		mg/L	1	9/12/2018 5:20:21 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:20:21 PM	40257
Uranium	ND	0.000068	0.00050		mg/L	1	9/12/2018 5:20:21 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000063	0.000038	0.00020	J	mg/L	1	9/18/2018 11:26:06 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 8:50:00 AM
Lab ID: 1808I45-002G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/18/2018 1:11:08 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 1:11:08 PM	A54217
Calcium	0.082	0.078	1.0	J	mg/L	1	9/18/2018 1:11:08 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 1:11:08 PM	A54217
Copper	0.0040	0.0032	0.0060	J	mg/L	1	9/18/2018 1:11:08 PM	A54217
Iron	ND	0.016	0.020		mg/L	1	9/18/2018 1:11:08 PM	A54217
Magnesium	ND	0.25	1.0		mg/L	1	9/18/2018 1:11:08 PM	A54217
Manganese	ND	0.00039	0.0020		mg/L	1	9/18/2018 1:11:08 PM	A54217
Potassium	ND	0.11	1.0		mg/L	1	9/18/2018 1:11:08 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 1:11:08 PM	A54217
Sodium	ND	0.16	1.0		mg/L	1	9/18/2018 1:11:08 PM	A54217
Zinc	0.013	0.0021	0.010		mg/L	1	9/18/2018 1:11:08 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/5/2018 12:52:07 PM	B53936
Lead	ND	0.00017	0.00050		mg/L	1	9/5/2018 12:52:07 PM	B53936
Selenium	ND	0.00076	0.0010		mg/L	1	9/5/2018 12:52:07 PM	B53936
Uranium	ND	0.000096	0.00050		mg/L	1	9/5/2018 12:52:07 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000068	0.000038	0.00020	J	mg/L	1	9/18/2018 11:28:24 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.21	0.024	0.050		mg/L	1	8/31/2018 8:54:19 PM	G53866
Surr: BFB	98.1	0	69.3-150		%Rec	1	8/31/2018 8:54:19 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11	0.17	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Toluene	0.70	0.17	1.0	J	µg/L	1	9/6/2018 6:17:00 PM	R54051
Ethylbenzene	1.8	0.22	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Methyl tert-butyl ether (MTBE)	4.3	0.32	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2,4-Trimethylbenzene	11	0.25	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,3,5-Trimethylbenzene	4.6	0.23	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2-Dichloroethane (EDC)	2.6	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Naphthalene	30	0.29	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1-Methylnaphthalene	17	0.34	4.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
2-Methylnaphthalene	12	0.24	4.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Acetone	46	0.79	10		µg/L	1	9/6/2018 6:17:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
2-Butanone	12	1.3	10		µg/L	1	9/6/2018 6:17:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 6:17:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 6:17:00 PM	R54051
Isopropylbenzene	0.71	0.22	1.0	J	µg/L	1	9/6/2018 6:17:00 PM	R54051
4-Isopropyltoluene	3.7	0.24	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
4-Methyl-2-pentanone	2.9	0.45	10	J	µg/L	1	9/6/2018 6:17:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
n-Propylbenzene	0.93	0.24	1.0	J	µg/L	1	9/6/2018 6:17:00 PM	R54051
sec-Butylbenzene	0.32	0.20	1.0	J	µg/L	1	9/6/2018 6:17:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 6:17:00 PM	R54051
Xylenes, Total	32	0.64	1.5		µg/L	1	9/6/2018 6:17:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	9/6/2018 6:17:00 PM	R54051
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	9/6/2018 6:17:00 PM	R54051
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	9/6/2018 6:17:00 PM	R54051
Surr: Toluene-d8	90.8	0	70-130		%Rec	1	9/6/2018 6:17:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.18	0.0049	0.0095		µg/L	1	9/4/2018 7:03:17 PM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	64	0.63	1.0		mg/L	1	9/4/2018 8:36:15 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 8:36:15 PM	40100
Surr: DNOP	121	0	76.7-135		%Rec	1	9/4/2018 8:36:15 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Acenaphthylene	ND	62	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Aniline	ND	62	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Anthracene	ND	57	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Azobenzene	ND	67	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benz(a)anthracene	ND	53	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzo(a)pyrene	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzo(b)fluoranthene	ND	71	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzo(k)fluoranthene	ND	64	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzoic acid	91	63	200	JD	µg/L	1	9/12/2018 5:21:49 PM	40131
Benzyl alcohol	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Butyl benzyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Carbazole	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Chloroaniline	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Chloronaphthalene	ND	61	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Chlorophenol	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Chrysene	ND	68	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Di-n-butyl phthalate	ND	68	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Di-n-octyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Dibenzofuran	ND	69	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
1,2-Dichlorobenzene	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
1,3-Dichlorobenzene	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
1,4-Dichlorobenzene	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Diethyl phthalate	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Dimethyl phthalate	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4-Dichlorophenol	ND	58	200	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4-Dimethylphenol	ND	59	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4-Dinitrophenol	ND	37	200	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4-Dinitrotoluene	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Fluoranthene	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Fluorene	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Hexachlorobenzene	ND	62	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Hexachlorobutadiene	ND	64	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Hexachloroethane	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Isophorone	ND	62	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
1-Methylnaphthalene	200	70	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Methylnaphthalene	300	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Methylphenol	ND	63	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
3+4-Methylphenol	ND	54	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
N-Nitrosodimethylamine	ND	69	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Naphthalene	ND	50	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Nitroaniline	ND	59	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
3-Nitroaniline	ND	68	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Nitroaniline	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Nitrobenzene	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2-Nitrophenol	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
4-Nitrophenol	ND	56	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Pentachlorophenol	ND	53	200	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Phenanthrene	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Phenol	ND	60	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Pyrene	ND	65	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Pyridine	ND	54	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	1	9/12/2018 5:21:49 PM	40131
Surr: 2-Fluorophenol	40.3	0	15-74.1	D	%Rec	1	9/12/2018 5:21:49 PM	40131
Surr: Phenol-d5	36.5	0	15-59.8	D	%Rec	1	9/12/2018 5:21:49 PM	40131
Surr: 2,4,6-Tribromophenol	58.2	0	22.1-112	D	%Rec	1	9/12/2018 5:21:49 PM	40131
Surr: Nitrobenzene-d5	63.4	0	33.2-94	D	%Rec	1	9/12/2018 5:21:49 PM	40131
Surr: 2-Fluorobiphenyl	61.7	0	34-90.9	D	%Rec	1	9/12/2018 5:21:49 PM	40131
Surr: 4-Terphenyl-d14	86.4	0	15-149	D	%Rec	1	9/12/2018 5:21:49 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.94	0.15	0.50		mg/L	5	8/31/2018 2:55:01 PM	R53882
Chloride	1000	2.9	50		mg/L	100	9/18/2018 7:59:20 PM	R54228
Bromide	1.6	0.13	0.50		mg/L	5	8/31/2018 2:55:01 PM	R53882
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	8/31/2018 2:55:01 PM	R53882
Sulfate	98	1.0	2.5		mg/L	5	8/31/2018 2:55:01 PM	R53882
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/31/2018 4:12:11 PM	R53882

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.074	0.0010	0.0020		mg/L	1	9/13/2018 7:38:46 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 7:38:46 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 7:38:46 PM	40257
Copper	0.0041	0.0041	0.0060	J	mg/L	1	9/13/2018 7:38:46 PM	40257
Iron	0.47	0.010	0.020	*	mg/L	1	9/13/2018 7:38:46 PM	40257
Manganese	0.15	0.0011	0.0020	*	mg/L	1	9/13/2018 7:38:46 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 7:38:46 PM	40257
Zinc	0.0060	0.0033	0.010	J	mg/L	1	9/13/2018 7:38:46 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	9/12/2018 5:22:39 PM	40257
Lead	0.00057	0.00023	0.00050		mg/L	1	9/12/2018 5:22:39 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:22:39 PM	40257
Uranium	0.010	0.00034	0.0025		mg/L	5	9/13/2018 5:59:50 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000074	0.000038	0.00020	J	mg/L	1	9/18/2018 11:30:35 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-42
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 9:30:00 AM
Lab ID: 1808I45-003G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.064	0.00099	0.0020		mg/L	1	9/18/2018 1:17:08 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 1:17:08 PM	A54217
Calcium	23	0.078	1.0		mg/L	1	9/18/2018 1:17:08 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 1:17:08 PM	A54217
Copper	0.0051	0.0032	0.0060	J	mg/L	1	9/18/2018 1:17:08 PM	A54217
Iron	0.11	0.016	0.020		mg/L	1	9/18/2018 1:17:08 PM	A54217
Magnesium	2.7	0.25	1.0		mg/L	1	9/18/2018 1:17:08 PM	A54217
Manganese	0.14	0.00039	0.0020	*	mg/L	1	9/18/2018 1:17:08 PM	A54217
Potassium	1.5	0.11	1.0		mg/L	1	9/18/2018 1:17:08 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 1:17:08 PM	A54217
Sodium	750	1.6	10		mg/L	10	9/18/2018 3:17:14 PM	A54217
Zinc	0.0088	0.0021	0.010	J	mg/L	1	9/18/2018 1:17:08 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/5/2018 12:56:57 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 12:56:57 PM	B53936
Selenium	ND	0.0038	0.0050		mg/L	5	9/5/2018 12:56:57 PM	B53936
Uranium	0.011	0.00048	0.0025		mg/L	5	9/5/2018 12:56:57 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000072	0.000038	0.00020	J	mg/L	1	9/18/2018 11:32:47 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	8/31/2018 9:40:50 PM	G53866
Surr: BFB	93.1	0	69.3-150		%Rec	1	8/31/2018 9:40:50 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Toluene	ND	0.17	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Methyl tert-butyl ether (MTBE)	1.1	0.32	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2,4-Trimethylbenzene	0.32	0.25	1.0	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2-Dichloroethane (EDC)	3.9	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Naphthalene	0.76	0.29	2.0	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
1-Methylnaphthalene	0.75	0.34	4.0	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
2-Methylnaphthalene	0.74	0.24	4.0	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
Acetone	ND	0.79	10		µg/L	1	9/6/2018 6:41:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
2-Butanone	ND	1.3	10		µg/L	1	9/6/2018 6:41:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 6:41:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1-Dichloroethane	5.0	0.40	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1-Dichloroethene	6.9	0.12	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 6:41:00 PM	R54051
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/6/2018 6:41:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,1,2-Trichloroethane	0.62	0.23	1.0	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 6:41:00 PM	R54051
Xylenes, Total	0.82	0.64	1.5	J	µg/L	1	9/6/2018 6:41:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	9/6/2018 6:41:00 PM	R54051
Surr: 4-Bromofluorobenzene	98.9	0	70-130		%Rec	1	9/6/2018 6:41:00 PM	R54051
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/6/2018 6:41:00 PM	R54051
Surr: Toluene-d8	94.2	0	70-130		%Rec	1	9/6/2018 6:41:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/4/2018 7:18:29 PM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/4/2018 9:25:09 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 9:25:09 PM	40100
Surr: DNOP	123	0	76.7-135		%Rec	1	9/4/2018 9:25:09 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/12/2018 5:51:18 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 5:51:18 PM	40131
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 5:51:18 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 5:51:18 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 5:51:18 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 5:51:18 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 5:51:18 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 5:51:18 PM	40131
Surr: 2-Fluorophenol	20.0	0	15-74.1		%Rec	1	9/12/2018 5:51:18 PM	40131
Surr: Phenol-d5	15.7	0	15-59.8		%Rec	1	9/12/2018 5:51:18 PM	40131
Surr: 2,4,6-Tribromophenol	37.7	0	22.1-112		%Rec	1	9/12/2018 5:51:18 PM	40131
Surr: Nitrobenzene-d5	25.9	0	33.2-94	S	%Rec	1	9/12/2018 5:51:18 PM	40131
Surr: 2-Fluorobiphenyl	24.7	0	34-90.9	S	%Rec	1	9/12/2018 5:51:18 PM	40131
Surr: 4-Terphenyl-d14	59.4	0	15-149		%Rec	1	9/12/2018 5:51:18 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.57	0.15	0.50		mg/L	5	8/31/2018 12:07:47 PM	R53882
Chloride	850	18	50		mg/L	100	9/18/2018 8:11:44 PM	R54228
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 12:07:47 PM	R53882
Bromide	2.3	0.13	0.50		mg/L	5	8/31/2018 12:07:47 PM	R53882
Nitrogen, Nitrate (As N)	5.5	0.033	0.50		mg/L	5	8/31/2018 12:07:47 PM	R53882
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 12:07:47 PM	R53882
Sulfate	64	1.0	2.5		mg/L	5	8/31/2018 12:07:47 PM	R53882

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.11	0.0010	0.0020		mg/L	1	9/13/2018 7:42:58 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 7:42:58 PM	40257
Chromium	0.0024	0.0018	0.0060	J	mg/L	1	9/13/2018 7:42:58 PM	40257
Copper	0.0064	0.0041	0.0060		mg/L	1	9/13/2018 7:42:58 PM	40257
Iron	3.1	0.051	0.10	*	mg/L	5	9/13/2018 7:44:54 PM	40257
Manganese	0.078	0.0011	0.0020	*	mg/L	1	9/13/2018 7:42:58 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 7:42:58 PM	40257
Zinc	0.014	0.0033	0.010		mg/L	1	9/13/2018 7:42:58 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0024	0.00041	0.0010		mg/L	1	9/12/2018 5:24:56 PM	40257
Lead	0.0020	0.00023	0.00050		mg/L	1	9/12/2018 5:24:56 PM	40257
Selenium	0.035	0.00098	0.0010		mg/L	1	9/12/2018 5:24:56 PM	40257
Uranium	0.014	0.00034	0.0025		mg/L	5	9/13/2018 6:06:44 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000084	0.000038	0.00020	J	mg/L	1	9/18/2018 11:35:00 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-41
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018 12:50:00 PM
Lab ID: 1808I45-004G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.056	0.00099	0.0020		mg/L	1	9/18/2018 1:21:18 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 1:21:18 PM	A54217
Calcium	15	0.078	1.0		mg/L	1	9/18/2018 1:21:18 PM	A54217
Chromium	0.0016	0.0013	0.0060	J	mg/L	1	9/18/2018 1:21:18 PM	A54217
Copper	ND	0.0032	0.0060		mg/L	1	9/18/2018 1:21:18 PM	A54217
Iron	0.029	0.016	0.020		mg/L	1	9/18/2018 1:21:18 PM	A54217
Magnesium	1.8	0.25	1.0		mg/L	1	9/18/2018 1:21:18 PM	A54217
Manganese	0.0028	0.00039	0.0020		mg/L	1	9/18/2018 1:21:18 PM	A54217
Potassium	1.5	0.11	1.0		mg/L	1	9/18/2018 1:21:18 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 1:21:18 PM	A54217
Sodium	700	1.6	10		mg/L	10	9/18/2018 3:25:50 PM	A54217
Zinc	0.010	0.0021	0.010		mg/L	1	9/18/2018 1:21:18 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/5/2018 12:59:19 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 12:59:19 PM	B53936
Selenium	0.035	0.0038	0.0050		mg/L	5	9/5/2018 12:59:19 PM	B53936
Uranium	0.013	0.00048	0.0025		mg/L	5	9/5/2018 12:59:19 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000076	0.000038	0.00020	J	mg/L	1	9/18/2018 11:37:13 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.21	0.024	0.050		mg/L	1	8/31/2018 10:27:31 PM	G53866
Surr: BFB	98.0	0	69.3-150		%Rec	1	8/31/2018 10:27:31 PM	G53866
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11	0.17	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Toluene	0.70	0.17	1.0	J	µg/L	1	9/6/2018 7:05:00 PM	R54051
Ethylbenzene	1.9	0.22	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Methyl tert-butyl ether (MTBE)	4.2	0.32	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2,4-Trimethylbenzene	11	0.25	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,3,5-Trimethylbenzene	4.8	0.23	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2-Dichloroethane (EDC)	2.5	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Naphthalene	29	0.29	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1-Methylnaphthalene	14	0.34	4.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
2-Methylnaphthalene	10	0.24	4.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Acetone	44	0.79	10		µg/L	1	9/6/2018 7:05:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
2-Butanone	13	1.3	10		µg/L	1	9/6/2018 7:05:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 7:05:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 7:05:00 PM	R54051
Isopropylbenzene	0.77	0.22	1.0	J	µg/L	1	9/6/2018 7:05:00 PM	R54051
4-Isopropyltoluene	3.6	0.24	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
4-Methyl-2-pentanone	2.6	0.45	10	J	µg/L	1	9/6/2018 7:05:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
n-Propylbenzene	0.94	0.24	1.0	J	µg/L	1	9/6/2018 7:05:00 PM	R54051
sec-Butylbenzene	0.32	0.20	1.0	J	µg/L	1	9/6/2018 7:05:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 7:05:00 PM	R54051
Xylenes, Total	33	0.64	1.5		µg/L	1	9/6/2018 7:05:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	9/6/2018 7:05:00 PM	R54051
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	9/6/2018 7:05:00 PM	R54051
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/6/2018 7:05:00 PM	R54051
Surr: Toluene-d8	91.2	0	70-130		%Rec	1	9/6/2018 7:05:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.20	0.0096	0.019		µg/L	2	9/5/2018 10:36:25 AM	40109

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	68	0.63	1.0		mg/L	1	9/4/2018 9:49:56 PM	40100
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/4/2018 9:49:56 PM	40100
Surr: DNOP	127	0	76.7-135		%Rec	1	9/4/2018 9:49:56 PM	40100

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Acenaphthylene	ND	6.2	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Aniline	ND	6.2	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Anthracene	ND	5.7	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Azobenzene	ND	6.7	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Benzoic acid	8.7	6.3	20	J	µg/L	1	9/12/2018 6:20:49 PM	40131
Benzyl alcohol	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Carbazole	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Chloroaniline	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Chlorophenol	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Chrysene	ND	6.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Dibenzofuran	ND	6.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Diethyl phthalate	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Fluoranthene	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Fluorene	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Hexachloroethane	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Isophorone	ND	6.2	10		µg/L	1	9/12/2018 6:20:49 PM	40131
1-Methylnaphthalene	32	7.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Methylnaphthalene	23	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Methylphenol	ND	6.3	10		µg/L	1	9/12/2018 6:20:49 PM	40131
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/12/2018 6:20:49 PM	40131
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Naphthalene	ND	5.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Nitroaniline	ND	5.9	10		µg/L	1	9/12/2018 6:20:49 PM	40131
3-Nitroaniline	ND	6.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Nitroaniline	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Nitrobenzene	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2-Nitrophenol	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
4-Nitrophenol	ND	5.6	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Pentachlorophenol	ND	5.3	20		µg/L	1	9/12/2018 6:20:49 PM	40131
Phenanthrene	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Phenol	ND	6.0	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Pyrene	ND	6.5	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Pyridine	ND	5.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/12/2018 6:20:49 PM	40131
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/12/2018 6:20:49 PM	40131
Surr: 2-Fluorophenol	46.7	0	15-74.1		%Rec	1	9/12/2018 6:20:49 PM	40131
Surr: Phenol-d5	38.3	0	15-59.8		%Rec	1	9/12/2018 6:20:49 PM	40131
Surr: 2,4,6-Tribromophenol	60.6	0	22.1-112		%Rec	1	9/12/2018 6:20:49 PM	40131
Surr: Nitrobenzene-d5	67.4	0	33.2-94		%Rec	1	9/12/2018 6:20:49 PM	40131
Surr: 2-Fluorobiphenyl	58.6	0	34-90.9		%Rec	1	9/12/2018 6:20:49 PM	40131
Surr: 4-Terphenyl-d14	93.0	0	15-149		%Rec	1	9/12/2018 6:20:49 PM	40131

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.93	0.15	0.50		mg/L	5	8/31/2018 3:20:45 PM	R53882
Chloride	1000	2.9	50		mg/L	100	9/18/2018 8:24:09 PM	R54228
Bromide	1.7	0.13	0.50		mg/L	5	8/31/2018 3:20:45 PM	R53882
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	8/31/2018 3:20:45 PM	R53882
Sulfate	98	1.0	2.5		mg/L	5	8/31/2018 3:20:45 PM	R53882
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	8/31/2018 5:03:38 PM	R53882

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.075	0.0010	0.0020		mg/L	1	9/13/2018 7:46:46 PM	40257
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 7:46:46 PM	40257
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 7:46:46 PM	40257
Copper	0.0044	0.0041	0.0060	J	mg/L	1	9/13/2018 7:46:46 PM	40257
Iron	0.45	0.010	0.020	*	mg/L	1	9/13/2018 7:46:46 PM	40257
Manganese	0.14	0.0011	0.0020	*	mg/L	1	9/13/2018 7:46:46 PM	40257
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 7:46:46 PM	40257
Zinc	0.0085	0.0033	0.010	J	mg/L	1	9/13/2018 7:46:46 PM	40257
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	9/12/2018 5:27:14 PM	40257
Lead	0.00056	0.00023	0.00050		mg/L	1	9/12/2018 5:27:14 PM	40257
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:27:14 PM	40257
Uranium	0.011	0.00034	0.0025		mg/L	5	9/13/2018 6:09:01 PM	40257
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000076	0.000038	0.00020	J	mg/L	1	9/18/2018 11:44:03 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP08
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/29/2018
Lab ID: 1808I45-005G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.062	0.00099	0.0020		mg/L	1	9/18/2018 1:31:59 PM	A54217
Cadmium	ND	0.0010	0.0020		mg/L	1	9/18/2018 1:31:59 PM	A54217
Calcium	22	0.078	1.0		mg/L	1	9/18/2018 1:31:59 PM	A54217
Chromium	ND	0.0013	0.0060		mg/L	1	9/18/2018 1:31:59 PM	A54217
Copper	0.0033	0.0032	0.0060	J	mg/L	1	9/18/2018 1:31:59 PM	A54217
Iron	0.088	0.016	0.020		mg/L	1	9/18/2018 1:31:59 PM	A54217
Magnesium	2.5	0.25	1.0		mg/L	1	9/18/2018 1:31:59 PM	A54217
Manganese	0.12	0.00039	0.0020	*	mg/L	1	9/18/2018 1:31:59 PM	A54217
Potassium	1.5	0.11	1.0		mg/L	1	9/18/2018 1:31:59 PM	A54217
Silver	ND	0.0018	0.0050		mg/L	1	9/18/2018 1:31:59 PM	A54217
Sodium	790	1.6	10		mg/L	10	9/18/2018 3:27:53 PM	A54217
Zinc	0.0062	0.0021	0.010	J	mg/L	1	9/18/2018 1:31:59 PM	A54217
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/5/2018 1:01:45 PM	B53936
Lead	ND	0.00087	0.0025		mg/L	5	9/5/2018 1:01:45 PM	B53936
Selenium	ND	0.0038	0.0050		mg/L	5	9/5/2018 1:01:45 PM	B53936
Uranium	0.012	0.00048	0.0025		mg/L	5	9/5/2018 1:01:45 PM	B53936
EPA METHOD 245.1: MERCURY							Analyst: **JLF**	
Mercury	0.000075	0.000038	0.00020	J	mg/L	1	9/18/2018 11:46:17 AM	40390

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808I45-006A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Toluene	ND	0.17	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Naphthalene	0.47	0.29	2.0	J	µg/L	1	9/6/2018 7:28:00 PM	R54051
1-Methylnaphthalene	0.55	0.34	4.0	J	µg/L	1	9/6/2018 7:28:00 PM	R54051
2-Methylnaphthalene	0.51	0.24	4.0	J	µg/L	1	9/6/2018 7:28:00 PM	R54051
Acetone	ND	0.79	10		µg/L	1	9/6/2018 7:28:00 PM	R54051
Bromobenzene	ND	0.32	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Bromoform	ND	0.32	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Bromomethane	ND	0.26	3.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
2-Butanone	ND	1.3	10		µg/L	1	9/6/2018 7:28:00 PM	R54051
Carbon disulfide	ND	0.39	10		µg/L	1	9/6/2018 7:28:00 PM	R54051
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Chloroethane	ND	0.16	2.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Chloroform	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Chloromethane	ND	0.29	3.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Dibromomethane	ND	0.32	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808I45-006A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
2-Hexanone	ND	0.91	10		µg/L	1	9/6/2018 7:28:00 PM	R54051
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/6/2018 7:28:00 PM	R54051
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Styrene	ND	0.25	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/6/2018 7:28:00 PM	R54051
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/6/2018 7:28:00 PM	R54051
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	9/6/2018 7:28:00 PM	R54051
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	9/6/2018 7:28:00 PM	R54051
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	9/6/2018 7:28:00 PM	R54051
Surr: Toluene-d8	92.7	0	70-130		%Rec	1	9/6/2018 7:28:00 PM	R54051

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793940** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0018	0.0020	0.002000	0	91.0	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.3	50	150			J
Copper	0.0069	0.0060	0.006000	0	116	50	150			
Iron	0.017	0.020	0.02000	0	83.1	50	150			J
Magnesium	0.48	1.0	0.5000	0	97.0	50	150			J
Manganese	0.0020	0.0020	0.002000	0	97.5	50	150			J
Potassium	0.42	1.0	0.5000	0	84.8	50	150			J
Silver	0.0050	0.0050	0.005000	0	100	50	150			
Sodium	0.50	1.0	0.5000	0	101	50	150			J
Zinc	0.0058	0.010	0.005000	0	115	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Calcium	46	1.0	50.00	0	91.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793941** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	95.7	85	115			
Iron	0.48	0.020	0.5000	0	96.0	85	115			
Magnesium	46	1.0	50.00	0	92.3	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Potassium	46	1.0	50.00	0	91.6	85	115			
Silver	0.096	0.0050	0.1000	0	96.0	85	115			
Sodium	48	1.0	50.00	0	95.8	85	115			
Zinc	0.49	0.010	0.5000	0	98.0	85	115			

Sample ID **1808I45-001GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB08**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1793999** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.2	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130			
Calcium	49	1.0	50.00	0	97.2	70	130			
Chromium	0.48	0.0060	0.5000	0	96.4	70	130			
Copper	0.49	0.0060	0.5000	0	97.5	70	130			
Iron	0.50	0.020	0.5000	0	99.1	70	130			
Magnesium	48	1.0	50.00	0	95.4	70	130			
Manganese	0.49	0.0020	0.5000	0	98.9	70	130			
Potassium	47	1.0	50.00	0	94.1	70	130			
Silver	0.092	0.0050	0.1000	0	92.2	70	130			
Sodium	51	1.0	50.00	0	101	70	130			
Zinc	0.52	0.010	0.5000	0.01071	102	70	130			

Sample ID **1808I45-001GMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **FB08**	Batch ID: **A54217**	RunNo: **54217**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794000** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	70	130	0.0478	20	
Cadmium	0.49	0.0020	0.5000	0	98.4	70	130	0.114	20	
Calcium	50	1.0	50.00	0	99.2	70	130	2.06	20	
Chromium	0.48	0.0060	0.5000	0	96.4	70	130	0.0353	20	
Copper	0.49	0.0060	0.5000	0	97.1	70	130	0.422	20	
Iron	0.50	0.020	0.5000	0	101	70	130	1.86	20	
Magnesium	48	1.0	50.00	0	96.8	70	130	1.47	20	
Manganese	0.49	0.0020	0.5000	0	98.4	70	130	0.497	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808I45-001GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**FB08**	Batch ID:	**A54217**	RunNo:	**54217**
Prep Date:		Analysis Date:	**9/18/2018**	SeqNo:	**1794000** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	48	1.0	50.00	0	95.4	70	130	1.31	20	
Silver	0.093	0.0050	0.1000	0	93.0	70	130	0.767	20	
Sodium	51	1.0	50.00	0	102	70	130	0.581	20	
Zinc	0.52	0.010	0.5000	0.01071	101	70	130	0.245	20	

Sample ID	**1808I45-002GMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**EB08**	Batch ID:	**A54217**	RunNo:	**54217**
Prep Date:		Analysis Date:	**9/18/2018**	SeqNo:	**1794002** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.1	70	130			
Calcium	49	1.0	50.00	0.08225	97.7	70	130			
Chromium	0.48	0.0060	0.5000	0	96.5	70	130			
Copper	0.48	0.0060	0.5000	0.003950	96.1	70	130			
Iron	0.50	0.020	0.5000	0	100	70	130			
Magnesium	48	1.0	50.00	0	95.4	70	130			
Manganese	0.49	0.0020	0.5000	0	98.1	70	130			
Potassium	47	1.0	50.00	0	93.8	70	130			
Silver	0.093	0.0050	0.1000	0	93.1	70	130			
Sodium	50	1.0	50.00	0	100	70	130			
Zinc	0.52	0.010	0.5000	0.01343	102	70	130			

Sample ID	**1808I45-002GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**EB08**	Batch ID:	**A54217**	RunNo:	**54217**
Prep Date:		Analysis Date:	**9/18/2018**	SeqNo:	**1794003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.8	70	130	0.372	20	
Cadmium	0.50	0.0020	0.5000	0	99.9	70	130	0.758	20	
Calcium	51	1.0	50.00	0.08225	101	70	130	3.76	20	
Chromium	0.49	0.0060	0.5000	0	97.1	70	130	0.570	20	
Copper	0.49	0.0060	0.5000	0.003950	97.0	70	130	0.992	20	
Iron	0.51	0.020	0.5000	0	101	70	130	1.08	20	
Magnesium	50	1.0	50.00	0	99.2	70	130	3.91	20	
Manganese	0.49	0.0020	0.5000	0	98.9	70	130	0.821	20	
Potassium	49	1.0	50.00	0	97.7	70	130	4.00	20	
Silver	0.094	0.0050	0.1000	0	93.9	70	130	0.834	20	
Sodium	52	1.0	50.00	0	104	70	130	3.85	20	
Zinc	0.53	0.010	0.5000	0.01343	103	70	130	0.833	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40257**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40257**	RunNo: **54126**
Prep Date: **9/10/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	0.0052	0.0060								J
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-40257**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40257**	RunNo: **54126**
Prep Date: **9/10/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789922** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	95.0	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.7	50	150			J
Copper	0.0086	0.0060	0.006000	0	144	50	150			
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Silver	0.0050	0.0050	0.005000	0	99.8	50	150			J
Zinc	0.0072	0.010	0.005000	0	145	50	150			J

Sample ID **LCS-40257**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40257**	RunNo: **54126**
Prep Date: **9/10/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789923** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	105	85	115			
Cadmium	0.53	0.0020	0.5000	0	107	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Copper	0.50	0.0060	0.5000	0	99.5	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780183** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.5	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.1	50	150			J
Uranium	0.00048	0.00050	0.0005000	0	96.3	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780184** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.012	0.00050	0.01250	0	99.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.7	85	115			
Uranium	0.012	0.00050	0.01250	0	97.6	85	115			

Sample ID **1808I45-001GLLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB08**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.8	70	130			
Lead	0.012	0.00050	0.01250	0	99.0	70	130			
Selenium	0.025	0.0010	0.02500	0	101	70	130			
Uranium	0.013	0.00050	0.01250	0	100	70	130			

Sample ID **1808I45-001GLLMS**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB08**	Batch ID: **B53936**	RunNo: **53936**
Prep Date:	Analysis Date: **9/5/2018**	SeqNo: **1780203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808I45-001GLLMS**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB08**	Batch ID:	**B53936**		RunNo:	**53936**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780203**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.8	70	130	1.05	20	
Lead	0.012	0.00050	0.01250	0	97.3	70	130	1.68	20	
Selenium	0.025	0.0010	0.02500	0	98.8	70	130	1.79	20	
Uranium	0.012	0.00050	0.01250	0	97.7	70	130	2.57	20	

Sample ID	**1808I45-002GLLMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB08**	Batch ID:	**B53936**		RunNo:	**53936**				
Prep Date:		Analysis Date:	**9/5/2018**		SeqNo:	**1780205**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	70	130			
Lead	0.012	0.00050	0.01250	0	98.4	70	130			
Selenium	0.025	0.0010	0.02500	0	99.2	70	130			
Uranium	0.012	0.00050	0.01250	0	97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40257**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788607**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-40257**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788611**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.4	85	115			
Selenium	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.011	0.00050	0.01250	0	86.8	85	115			

Sample ID	**MSLLLCS-40257**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40257**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788614**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.4	50	150			J
Selenium	0.00093	0.0010	0.001000	0	93.4	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	90.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40390**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40390**	RunNo:	**54219**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793094**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000072	0.00020								J

Sample ID	**LCS-40390**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40390**	RunNo:	**54219**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793095**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	101	80	120			

Sample ID	**1808I45-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB08**	Batch ID:	**40390**	RunNo:	**54219**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793107**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	.00007569	99.8	75	125			

Sample ID	**1808I45-001FMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB08**	Batch ID:	**40390**	RunNo:	**54219**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793108**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	.00007569	100	75	125	0.514	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53882**	RunNo: **53882**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778340** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53882**	RunNo: **53882**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778341** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	99.0	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40109**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779112**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40109**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779113**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.085	0.010	0.1000	0	85.4	70	130			

Sample ID	**1808I45-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB08**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779198**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.090	0.0095	0.09485	0	95.0	55	125			

Sample ID	**1808I45-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**FB08**	Batch ID:	**40109**	RunNo:	**53905**					
Prep Date:	**9/4/2018**	Analysis Date:	**9/4/2018**	SeqNo:	**1779199**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.083	0.0093	0.09309	0	88.9	55	125	8.52	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40100**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		118	76.7	135			

Sample ID **LCS-40100**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40100**	RunNo: **53887**
Prep Date: **8/31/2018**	Analysis Date: **9/4/2018**	SeqNo: **1778490** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	103	70	130			
Surr: DNOP	0.52		0.5000		103	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777397** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.1	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G53866**	RunNo: **53866**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1777398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	101	79.5	127			
Surr: BFB	22		20.00		108	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785849** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	95.9	70	130			
Chlorobenzene	19	1.0	20.00	0	95.5	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**
26-Sep-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785850** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Sample ID **1808i45-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB08**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785901** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	60.5	137			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	99.4	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.3		10.00		92.7	70	130			

Sample ID **1808i45-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB08**	Batch ID: **R54051**	RunNo: **54051**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1785902** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	60.5	137	4.06	20	
Toluene	19	1.0	20.00	0	95.8	70	130	6.14	20	
Chlorobenzene	19	1.0	20.00	0	94.2	70	130	5.42	20	
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130	5.37	20	
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130	4.02	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	9.1		10.00		90.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40131**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788421** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.3	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	80.1	57	115			
2-Chlorophenol	140	10	200.0	0	68.9	43.4	112			
1,4-Dichlorobenzene	55	10	100.0	0	55.1	38	95.2			
2,4-Dinitrotoluene	62	10	100.0	0	62.3	55.1	96.7			
N-Nitrosodi-n-propylamine	86	10	100.0	0	86.3	55	112			
4-Nitrophenol	87	10	200.0	0	43.7	16.6	93			
Pentachlorophenol	130	20	200.0	0	66.7	43.2	104			
Phenol	82	10	200.0	0	40.8	21.3	85.7			
Pyrene	78	10	100.0	0	78.3	64.9	105			
1,2,4-Trichlorobenzene	65	10	100.0	0	64.8	42.6	107			
Surr: 2-Fluorophenol	98		200.0		49.0	15	74.1			
Surr: Phenol-d5	85		200.0		42.6	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		72.3	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		69.5	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		62.1	34	90.9			
Surr: 4-Terphenyl-d14	95		100.0		95.0	15	149			

Sample ID **lcsd-40131**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788422** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	73.3	55.1	104	11.5	34.9	
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	57	115	10.8	30.2	
2-Chlorophenol	150	10	200.0	0	72.6	43.4	112	5.19	49.5	
1,4-Dichlorobenzene	61	10	100.0	0	61.3	38	95.2	10.5	43.2	
2,4-Dinitrotoluene	74	10	100.0	0	74.4	55.1	96.7	17.7	49.9	
N-Nitrosodi-n-propylamine	91	10	100.0	0	90.7	55	112	5.00	42.1	
4-Nitrophenol	100	10	200.0	0	51.2	16.6	93	15.9	31.5	
Pentachlorophenol	160	20	200.0	0	78.2	43.2	104	15.9	52.5	
Phenol	86	10	200.0	0	42.8	21.3	85.7	4.69	54.4	
Pyrene	87	10	100.0	0	87.4	64.9	105	11.0	30.7	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.3	42.6	107	8.12	48.1	
Surr: 2-Fluorophenol	110		200.0		52.5	15	74.1	0	0	
Surr: Phenol-d5	88		200.0		44.2	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		81.4	22.1	112	0	0	
Surr: Nitrobenzene-d5	75		100.0		75.2	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	72		100.0		72.5	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**lcsd-40131**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**40131**		RunNo:	**54109**				
Prep Date:	**9/4/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788422**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	100		100.0		104	15	149	0	0	

Sample ID	**mb-40131**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**40131**		RunNo:	**54109**				
Prep Date:	**9/4/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788423**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.7	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40131**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808I45**

26-Sep-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40131**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40131**	RunNo: **54109**
Prep Date: **9/4/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	83		200.0		41.7	15	74.1			
Surr: Phenol-d5	69		200.0		34.3	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		70.3	22.1	112			
Surr: Nitrobenzene-d5	54		100.0		54.2	33.2	94			
Surr: 2-Fluorobiphenyl	53		100.0		53.2	34	90.9			
Surr: 4-Terphenyl-d14	93		100.0		93.2	15	149			

Sample ID **lcs-40466**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798877** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		59.2	15	74.1			
Surr: Phenol-d5	130		200.0		63.1	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.1	22.1	112			
Surr: Nitrobenzene-d5	70		100.0		70.0	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		69.5	34	90.9			
Surr: 4-Terphenyl-d14	85		100.0		85.5	15	149			

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	66		200.0		32.8	15	74.1			
Surr: Phenol-d5	89		200.0		44.5	15	59.8			
Surr: 2,4,6-Tribromophenol	75		200.0		37.6	22.1	112			
Surr: Nitrobenzene-d5	68		100.0		68.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	34	90.9			
Surr: 4-Terphenyl-d14	86		100.0		85.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808I45 RcptNo: 1

Received By: **Michelle Garcia** 8/31/2018 8:45:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 8/31/2018 9:55:26 AM Michelle Garcia

Reviewed By: TO 08/31/2018

LB: ENM 8/31/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 15 (<2 or >12 unless noted)
Adjusted? NO
Checked by: ENM 8/31/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
2	0.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush_____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808I45	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
3/29/18	0830	H_2O	FB08	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/30/18	0700		Courier ENH 8/31/18	8/31/18	0845
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler1: 1.4
Cooler2: 0.1 ENH 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808I145	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
3/29/18	0850	H_2O	EB08	40ml VOA-5	HCl	-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/30/18	0700		Courier ENH 8/31/18	8/31/18	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler 1: 1.4

Cooler 2: 0.1 ENH 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808I145	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
3/29/18	0930	H_2O	MKTF-42	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/30/18	0700		Courier ENH 8/31/18	8/31/18	0845
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler 1: 1.4

Cooler 2: 0.1 ENH 8/31/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808I45	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/29/18	1250	H_2O	MKTF-41	40ml VOA-5	HCl	-004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -1	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date	Time	Relinquished by:	Received by:	Date	Time
8/30/18	0700		Courier ENM 8/31/18	8/31/18	0845
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler 1: 1.4
Cooler 2: 0.1 ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808I45	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/29/18	—	H_2O	DUP08	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/29/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	-006										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/30/18	0700		Courier ENM 8/31/18	8/31/18	0845
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler 1: 1.4
Cooler 2: 0.1 ENM 8/31/18

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 12, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1808J13

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 16 sample(s) on 8/31/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1808J13**
Date: **10/12/2018**

CLIENT: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Analytical Notes Regrading EPA Method 8015 DRO/MRO:
Samples with and "S" flagged surrogate we reanalzyed to confirm the data.

Analytical Notes Regarding EPA Method 8270:
Sample "MKTF-13" formed a heavy emulsion during the extractin process. Surrogate recoveries are low due to this emulsion. The sample was reextracted, past the holding time, to comfirm the low surrogate recoveries and the data results. Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene are reported from the second analysis with "H" flags. It is recommended that Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene data be used from the 8260 analysis.
Analytical Comments for 8270_W, Sample 1808j13-007c, Batch ID 40294 : Analytical Sequence's Prep Method hold time was exceeded by 5.832 days. Sample was originally extracted within holding time with failing surrogate recoveries. The re-extraction had better surrogate recoveries and hits not in the original. Reporting 2nd

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Toluene	ND	0.17	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Naphthalene	ND	0.29	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Acetone	11	0.79	10		µg/L	1	9/7/2018 8:01:28 PM	W54008
Bromobenzene	ND	0.32	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Bromoform	ND	0.32	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Bromomethane	ND	0.26	3.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
2-Butanone	ND	1.3	10		µg/L	1	9/7/2018 8:01:28 PM	W54008
Carbon disulfide	ND	0.39	10		µg/L	1	9/7/2018 8:01:28 PM	W54008
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Chloroethane	ND	0.16	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Chloroform	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Chloromethane	ND	0.29	3.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Dibromomethane	ND	0.32	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
2-Hexanone	ND	0.91	10		µg/L	1	9/7/2018 8:01:28 PM	W54008
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/7/2018 8:01:28 PM	W54008
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Styrene	ND	0.25	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/7/2018 8:01:28 PM	W54008
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/7/2018 8:01:28 PM	W54008
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	9/7/2018 8:01:28 PM	W54008
Surr: 4-Bromofluorobenzene	111	0	70-130		%Rec	1	9/7/2018 8:01:28 PM	W54008
Surr: Dibromofluoromethane	113	0	70-130		%Rec	1	9/7/2018 8:01:28 PM	W54008
Surr: Toluene-d8	112	0	70-130		%Rec	1	9/7/2018 8:01:28 PM	W54008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.013	0.0097	0.050	J	mg/L	1	9/10/2018 4:44:04 PM	G54032
Surr: BFB	93.8	0	70-130		%Rec	1	9/10/2018 4:44:04 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.71	0.63	1.0	J	mg/L	1	9/6/2018 11:30:56 PM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/6/2018 11:30:56 PM	40147
Surr: DNOP	105	0	76.7-135		%Rec	1	9/6/2018 11:30:56 PM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Benzoic acid	7.6	6.3	20	J	µg/L	1	9/10/2018 12:05:24 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Bis(2-ethylhexyl)phthalate	94	8.1	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 12:05:24 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 12:05:24 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 12:05:24 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 12:05:24 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 12:05:24 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 12:05:24 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 12:05:24 PM	40141
Surr: 2-Fluorophenol	40.0	0	15-74.1		%Rec	1	9/10/2018 12:05:24 PM	40141
Surr: Phenol-d5	31.4	0	15-59.8		%Rec	1	9/10/2018 12:05:24 PM	40141
Surr: 2,4,6-Tribromophenol	62.0	0	22.1-112		%Rec	1	9/10/2018 12:05:24 PM	40141
Surr: Nitrobenzene-d5	66.4	0	33.2-94		%Rec	1	9/10/2018 12:05:24 PM	40141
Surr: 2-Fluorobiphenyl	58.8	0	34-90.9		%Rec	1	9/10/2018 12:05:24 PM	40141
Surr: 4-Terphenyl-d14	52.2	0	15-149		%Rec	1	9/10/2018 12:05:24 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 5:18:55 PM	R53878
Chloride	ND	0.029	0.50		mg/L	1	8/31/2018 5:18:55 PM	R53878
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/31/2018 5:18:55 PM	R53878
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 5:18:55 PM	R53878
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	8/31/2018 5:18:55 PM	R53878
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/31/2018 5:18:55 PM	R53878
Sulfate	ND	0.21	0.50		mg/L	1	8/31/2018 5:18:55 PM	R53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 8:17:24 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:17:24 PM	A54392
Calcium	ND	0.078	1.0		mg/L	1	9/20/2018 11:07:40 PM	B54309
Chromium	0.0015	0.0013	0.0060	J	mg/L	1	9/25/2018 8:17:24 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:07:40 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:07:40 PM	B54309
Magnesium	ND	0.25	1.0		mg/L	1	9/20/2018 11:07:40 PM	B54309
Manganese	ND	0.00039	0.0020		mg/L	1	9/20/2018 11:07:40 PM	B54309
Potassium	0.24	0.11	1.0	J	mg/L	1	9/20/2018 11:07:40 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:07:40 PM	B54309
Sodium	0.52	0.16	1.0	J	mg/L	1	9/20/2018 11:07:40 PM	B54309
Zinc	0.0068	0.0021	0.010	J	mg/L	1	9/25/2018 8:17:24 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/7/2018 11:12:30 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:12:30 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:12:30 AM	B53991
Uranium	ND	0.000096	0.00050		mg/L	1	9/7/2018 11:12:30 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 7:50:00 AM
Lab ID: 1808J13-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 8:20:27 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:20:27 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:20:27 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:20:27 PM	40309
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 8:20:27 PM	40309
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 8:20:27 PM	40309
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 8:20:27 PM	40309
Zinc	0.0037	0.0033	0.010	J	mg/L	1	9/13/2018 8:20:27 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/13/2018 6:15:54 PM	40309
Lead	ND	0.00023	0.00050		mg/L	1	9/13/2018 6:15:54 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:15:54 PM	40309
Uranium	ND	0.000068	0.00050		mg/L	1	9/13/2018 6:15:54 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/20/2018 10:47:34 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Toluene	ND	0.17	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Naphthalene	ND	0.29	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Acetone	4.6	0.79	10	J	µg/L	1	9/7/2018 8:30:44 PM	W54008
Bromobenzene	ND	0.32	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Bromoform	ND	0.32	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Bromomethane	ND	0.26	3.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
2-Butanone	ND	1.3	10		µg/L	1	9/7/2018 8:30:44 PM	W54008
Carbon disulfide	ND	0.39	10		µg/L	1	9/7/2018 8:30:44 PM	W54008
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Chloroethane	ND	0.16	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Chloroform	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Chloromethane	ND	0.29	3.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Dibromomethane	ND	0.32	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
2-Hexanone	ND	0.91	10		µg/L	1	9/7/2018 8:30:44 PM	W54008
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/7/2018 8:30:44 PM	W54008
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Styrene	ND	0.25	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/7/2018 8:30:44 PM	W54008
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/7/2018 8:30:44 PM	W54008
Surr: 1,2-Dichloroethane-d4	116	0	70-130		%Rec	1	9/7/2018 8:30:44 PM	W54008
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	9/7/2018 8:30:44 PM	W54008
Surr: Dibromofluoromethane	116	0	70-130		%Rec	1	9/7/2018 8:30:44 PM	W54008
Surr: Toluene-d8	114	0	70-130		%Rec	1	9/7/2018 8:30:44 PM	W54008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/10/2018 5:13:29 PM	G54032
Surr: BFB	91.3	0	70-130		%Rec	1	9/10/2018 5:13:29 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.74	0.63	1.0	J	mg/L	1	9/7/2018 12:37:01 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 12:37:01 AM	40147
Surr: DNOP	109	0	76.7-135		%Rec	1	9/7/2018 12:37:01 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Benzoic acid	7.4	6.3	20	J	µg/L	1	9/10/2018 12:34:49 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 12:34:49 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 12:34:49 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 12:34:49 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 12:34:49 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 12:34:49 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 12:34:49 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 12:34:49 PM	40141
Surr: 2-Fluorophenol	43.0	0	15-74.1		%Rec	1	9/10/2018 12:34:49 PM	40141
Surr: Phenol-d5	32.7	0	15-59.8		%Rec	1	9/10/2018 12:34:49 PM	40141
Surr: 2,4,6-Tribromophenol	65.9	0	22.1-112		%Rec	1	9/10/2018 12:34:49 PM	40141
Surr: Nitrobenzene-d5	62.0	0	33.2-94		%Rec	1	9/10/2018 12:34:49 PM	40141
Surr: 2-Fluorobiphenyl	61.5	0	34-90.9		%Rec	1	9/10/2018 12:34:49 PM	40141
Surr: 4-Terphenyl-d14	72.4	0	15-149		%Rec	1	9/10/2018 12:34:49 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 5:43:45 PM	R53878
Chloride	0.19	0.029	0.50	J	mg/L	1	8/31/2018 5:43:45 PM	R53878
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/31/2018 5:43:45 PM	R53878
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 5:43:45 PM	R53878
Nitrogen, Nitrate (As N)	0.023	0.0066	0.10	J	mg/L	1	8/31/2018 5:43:45 PM	R53878
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/31/2018 5:43:45 PM	R53878
Sulfate	1.2	0.21	0.50		mg/L	1	8/31/2018 5:43:45 PM	R53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 8:19:34 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:19:34 PM	A54392
Calcium	0.086	0.078	1.0	J	mg/L	1	9/20/2018 11:09:34 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:19:34 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:09:34 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:09:34 PM	B54309
Magnesium	ND	0.25	1.0		mg/L	1	9/20/2018 11:09:34 PM	B54309
Manganese	ND	0.00039	0.0020		mg/L	1	9/20/2018 11:09:34 PM	B54309
Potassium	0.19	0.11	1.0	J	mg/L	1	9/20/2018 11:09:34 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:09:34 PM	B54309
Sodium	0.75	0.16	1.0	J	mg/L	1	9/20/2018 11:09:34 PM	B54309
Zinc	0.0059	0.0021	0.010	J	mg/L	1	9/25/2018 8:19:34 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/7/2018 11:24:29 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:24:29 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:24:29 AM	B53991
Uranium	ND	0.000096	0.00050		mg/L	1	9/7/2018 11:24:29 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:05:00 AM
Lab ID: 1808J13-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 8:33:21 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:33:21 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:33:21 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:33:21 PM	40309
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 8:33:21 PM	40309
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 8:33:21 PM	40309
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 8:33:21 PM	40309
Zinc	0.0035	0.0033	0.010	J	mg/L	1	9/13/2018 8:33:21 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/13/2018 6:18:12 PM	40309
Lead	ND	0.00023	0.00050		mg/L	1	9/13/2018 6:18:12 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:18:12 PM	40309
Uranium	ND	0.000068	0.00050		mg/L	1	9/13/2018 6:18:12 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000039	0.000038	0.00020	J	mg/L	1	9/20/2018 10:49:49 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Toluene	ND	0.17	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Naphthalene	ND	0.29	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Acetone	8.1	0.79	10	J	µg/L	1	9/7/2018 9:00:03 PM	W54008
Bromobenzene	ND	0.32	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Bromoform	ND	0.32	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Bromomethane	ND	0.26	3.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
2-Butanone	ND	1.3	10		µg/L	1	9/7/2018 9:00:03 PM	W54008
Carbon disulfide	ND	0.39	10		µg/L	1	9/7/2018 9:00:03 PM	W54008
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Chloroethane	ND	0.16	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Chloroform	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Chloromethane	ND	0.29	3.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Dibromomethane	ND	0.32	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
2-Hexanone	ND	0.91	10		µg/L	1	9/7/2018 9:00:03 PM	W54008
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/7/2018 9:00:03 PM	W54008
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Styrene	ND	0.25	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/7/2018 9:00:03 PM	W54008
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/7/2018 9:00:03 PM	W54008
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	9/7/2018 9:00:03 PM	W54008
Surr: 4-Bromofluorobenzene	117	0	70-130		%Rec	1	9/7/2018 9:00:03 PM	W54008
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/7/2018 9:00:03 PM	W54008
Surr: Toluene-d8	106	0	70-130		%Rec	1	9/7/2018 9:00:03 PM	W54008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.015	0.0097	0.050	J	mg/L	1	9/10/2018 5:42:55 PM	G54032
Surr: BFB	93.6	0	70-130		%Rec	1	9/10/2018 5:42:55 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.7	0.63	1.0		mg/L	1	9/7/2018 12:58:57 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 12:58:57 AM	40147
Surr: DNOP	132	0	76.7-135		%Rec	1	9/7/2018 12:58:57 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzoic acid	ND	6.3	20		µg/L	1	9/10/2018 1:04:25 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 1:04:25 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 1:04:25 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 1:04:25 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 1:04:25 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 1:04:25 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 1:04:25 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 1:04:25 PM	40141
Surr: 2-Fluorophenol	42.6	0	15-74.1		%Rec	1	9/10/2018 1:04:25 PM	40141
Surr: Phenol-d5	30.5	0	15-59.8		%Rec	1	9/10/2018 1:04:25 PM	40141
Surr: 2,4,6-Tribromophenol	61.6	0	22.1-112		%Rec	1	9/10/2018 1:04:25 PM	40141
Surr: Nitrobenzene-d5	68.6	0	33.2-94		%Rec	1	9/10/2018 1:04:25 PM	40141
Surr: 2-Fluorobiphenyl	65.4	0	34-90.9		%Rec	1	9/10/2018 1:04:25 PM	40141
Surr: 4-Terphenyl-d14	58.7	0	15-149		%Rec	1	9/10/2018 1:04:25 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.17	0.15	0.50	J	mg/L	5	8/31/2018 6:08:35 PM	R53878
Chloride	530	9.1	25		mg/L	50	9/18/2018 7:50:14 PM	R54253
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 6:08:35 PM	R53878
Bromide	0.53	0.13	0.50		mg/L	5	8/31/2018 6:08:35 PM	R53878
Nitrogen, Nitrate (As N)	2.5	0.033	0.50		mg/L	5	8/31/2018 6:08:35 PM	R53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 6:08:35 PM	R53878
Sulfate	96	1.0	2.5		mg/L	5	8/31/2018 6:08:35 PM	R53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.062	0.00099	0.0020		mg/L	1	9/25/2018 8:21:43 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:21:43 PM	A54392
Calcium	21	0.078	1.0		mg/L	1	9/20/2018 11:11:29 PM	B54309
Chromium	0.0040	0.0013	0.0060	J	mg/L	1	9/25/2018 8:21:43 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:11:29 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:11:29 PM	B54309
Magnesium	1.0	0.25	1.0		mg/L	1	9/20/2018 11:11:29 PM	B54309
Manganese	0.0013	0.00039	0.0020	J	mg/L	1	9/20/2018 11:11:29 PM	B54309
Potassium	1.8	0.11	1.0		mg/L	1	9/20/2018 11:11:29 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:11:29 PM	B54309
Sodium	630	1.6	10		mg/L	10	9/25/2018 8:23:48 PM	A54392
Zinc	0.0060	0.0021	0.010	J	mg/L	1	9/25/2018 8:21:43 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0050	0.00042	0.0010		mg/L	1	9/7/2018 11:29:14 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:29:14 AM	B53991
Selenium	0.011	0.00076	0.0010		mg/L	1	9/7/2018 11:29:14 AM	B53991
Uranium	0.15	0.00096	0.0050	*	mg/L	10	9/7/2018 12:09:47 PM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-44
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 8:35:00 AM
Lab ID: 1808J13-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.071	0.0010	0.0020		mg/L	1	9/13/2018 8:35:35 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:35:35 PM	40309
Chromium	0.0046	0.0018	0.0060	J	mg/L	1	9/13/2018 8:35:35 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:35:35 PM	40309
Iron	0.89	0.010	0.020	*	mg/L	1	9/13/2018 8:35:35 PM	40309
Manganese	0.016	0.0011	0.0020		mg/L	1	9/13/2018 8:35:35 PM	40309
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 8:35:35 PM	40309
Zinc	0.0052	0.0033	0.010	J	mg/L	1	9/13/2018 8:35:35 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0048	0.00041	0.0010		mg/L	1	9/13/2018 6:20:30 PM	40309
Lead	0.00081	0.00023	0.00050		mg/L	1	9/13/2018 6:20:30 PM	40309
Selenium	0.010	0.00098	0.0010		mg/L	1	9/13/2018 6:20:30 PM	40309
Uranium	0.16	0.00068	0.0050	*	mg/L	10	9/18/2018 1:39:42 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000039	0.000038	0.00020	J	mg/L	1	9/20/2018 10:52:06 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Toluene	ND	0.17	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Naphthalene	ND	0.29	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Acetone	12	0.79	10		µg/L	1	9/7/2018 9:29:24 PM	W54008
Bromobenzene	ND	0.32	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Bromoform	ND	0.32	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Bromomethane	ND	0.26	3.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
2-Butanone	ND	1.3	10		µg/L	1	9/7/2018 9:29:24 PM	W54008
Carbon disulfide	ND	0.39	10		µg/L	1	9/7/2018 9:29:24 PM	W54008
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Chloroethane	ND	0.16	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Chloroform	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Chloromethane	ND	0.29	3.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Dibromomethane	ND	0.32	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
2-Hexanone	ND	0.91	10		µg/L	1	9/7/2018 9:29:24 PM	W54008
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/7/2018 9:29:24 PM	W54008
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Styrene	ND	0.25	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/7/2018 9:29:24 PM	W54008
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/7/2018 9:29:24 PM	W54008
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	9/7/2018 9:29:24 PM	W54008
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	9/7/2018 9:29:24 PM	W54008
Surr: Dibromofluoromethane	112	0	70-130		%Rec	1	9/7/2018 9:29:24 PM	W54008
Surr: Toluene-d8	105	0	70-130		%Rec	1	9/7/2018 9:29:24 PM	W54008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/10/2018 6:12:16 PM	G54032
Surr: BFB	90.8	0	70-130		%Rec	1	9/10/2018 6:12:16 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/7/2018 1:21:00 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 1:21:00 AM	40147
Surr: DNOP	37.5	0	76.7-135	S	%Rec	1	9/7/2018 1:21:00 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Benzoic acid	6.4	6.3	20	J	µg/L	1	9/10/2018 1:33:50 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 1:33:50 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 1:33:50 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 1:33:50 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 1:33:50 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 1:33:50 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 1:33:50 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 1:33:50 PM	40141
Surr: 2-Fluorophenol	0.780	0	15-74.1	S	%Rec	1	9/10/2018 1:33:50 PM	40141
Surr: Phenol-d5	1.08	0	15-59.8	S	%Rec	1	9/10/2018 1:33:50 PM	40141
Surr: 2,4,6-Tribromophenol	2.13	0	22.1-112	S	%Rec	1	9/10/2018 1:33:50 PM	40141
Surr: Nitrobenzene-d5	67.6	0	33.2-94		%Rec	1	9/10/2018 1:33:50 PM	40141
Surr: 2-Fluorobiphenyl	64.5	0	34-90.9		%Rec	1	9/10/2018 1:33:50 PM	40141
Surr: 4-Terphenyl-d14	104	0	15-149		%Rec	1	9/10/2018 1:33:50 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.38	0.15	0.50	J	mg/L	5	8/31/2018 6:58:12 PM	A53878
Chloride	3200	15	250		mg/L	500	9/18/2018 8:03:05 PM	R54253
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	8/31/2018 7:10:37 PM	A53878
Bromide	1.2	0.13	0.50		mg/L	5	8/31/2018 6:58:12 PM	A53878
Nitrogen, Nitrate (As N)	8.5	0.033	0.50		mg/L	5	8/31/2018 6:58:12 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 6:58:12 PM	A53878
Sulfate	260	4.1	10		mg/L	20	8/31/2018 7:10:37 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.14	0.00099	0.0020		mg/L	1	9/25/2018 8:25:45 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:25:45 PM	A54392
Calcium	510	1.6	20		mg/L	20	9/25/2018 8:36:24 PM	A54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:25:45 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:13:29 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:13:29 PM	B54309
Magnesium	84	0.25	1.0		mg/L	1	9/20/2018 11:13:29 PM	B54309
Manganese	0.38	0.00039	0.0020	*	mg/L	1	9/20/2018 11:13:29 PM	B54309
Potassium	18	0.11	1.0		mg/L	1	9/20/2018 11:13:29 PM	B54309
Silver	0.013	0.0018	0.0050		mg/L	1	9/25/2018 8:25:45 PM	A54392
Sodium	1200	3.3	20		mg/L	20	9/25/2018 8:36:24 PM	A54392
Zinc	0.011	0.0021	0.010		mg/L	1	9/25/2018 8:25:45 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	9/7/2018 12:12:10 PM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:31:37 AM	B53991
Selenium	ND	0.0038	0.0050		mg/L	5	9/7/2018 12:12:10 PM	B53991
Uranium	0.019	0.000096	0.00050		mg/L	1	9/7/2018 11:31:37 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-43
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 9:10:00 AM
Lab ID: 1808J13-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/13/2018 8:37:33 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:37:33 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:37:33 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:37:33 PM	40309
Iron	0.25	0.010	0.020		mg/L	1	9/13/2018 8:37:33 PM	40309
Manganese	0.43	0.0011	0.0020	*	mg/L	1	9/13/2018 8:37:33 PM	40309
Silver	0.012	0.0012	0.0050		mg/L	1	9/13/2018 8:37:33 PM	40309
Zinc	0.0066	0.0033	0.010	J	mg/L	1	9/13/2018 8:37:33 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0058	0.0021	0.0050		mg/L	5	9/14/2018 6:59:27 PM	40309
Lead	ND	0.0011	0.0025		mg/L	5	9/14/2018 6:59:27 PM	40309
Selenium	ND	0.0049	0.0050		mg/L	5	9/14/2018 6:59:27 PM	40309
Uranium	0.021	0.00034	0.0025		mg/L	5	9/18/2018 1:46:35 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000051	0.000038	0.00020	J	mg/L	1	9/20/2018 10:59:00 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Toluene	ND	0.34	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Ethylbenzene	ND	0.45	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Methyl tert-butyl ether (MTBE)	580	6.4	20		µg/L	20	9/10/2018 7:11:23 PM	W54032
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2-Dichloroethane (EDC)	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Naphthalene	ND	0.58	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
2-Methylnaphthalene	ND	0.48	8.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Acetone	ND	1.6	20		µg/L	2	9/10/2018 7:40:33 PM	W54032
Bromobenzene	ND	0.64	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Bromodichloromethane	ND	0.57	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Bromoform	ND	0.65	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Bromomethane	ND	0.51	6.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
2-Butanone	ND	2.5	20		µg/L	2	9/10/2018 7:40:33 PM	W54032
Carbon disulfide	ND	0.77	20		µg/L	2	9/10/2018 7:40:33 PM	W54032
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Chlorobenzene	ND	0.58	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Chloroethane	ND	0.33	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Chloroform	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Chloromethane	ND	0.59	6.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
2-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
4-Chlorotoluene	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Dibromochloromethane	ND	0.47	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Dibromomethane	ND	0.64	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,4-Dichlorobenzene	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Dichlorodifluoromethane	ND	2.0	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1-Dichloroethane	ND	0.80	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1-Dichloroethene	ND	0.24	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2-Dichloropropane	ND	0.31	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
2,2-Dichloropropane	ND	0.37	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1-Dichloropropene	ND	0.32	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
2-Hexanone	ND	1.8	20		µg/L	2	9/10/2018 7:40:33 PM	W54032
Isopropylbenzene	ND	0.44	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	9/10/2018 7:40:33 PM	W54032
Methylene Chloride	ND	0.41	6.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
n-Butylbenzene	ND	0.50	6.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
n-Propylbenzene	ND	0.49	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
sec-Butylbenzene	ND	0.40	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Styrene	ND	0.50	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
trans-1,2-DCE	ND	0.37	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1,1-Trichloroethane	ND	0.31	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Trichlorofluoromethane	ND	0.34	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Vinyl chloride	ND	0.22	2.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Xylenes, Total	ND	1.3	3.0		µg/L	2	9/10/2018 7:40:33 PM	W54032
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	2	9/10/2018 7:40:33 PM	W54032
Surr: 4-Bromofluorobenzene	95.6	0	70-130		%Rec	2	9/10/2018 7:40:33 PM	W54032
Surr: Dibromofluoromethane	103	0	70-130		%Rec	2	9/10/2018 7:40:33 PM	W54032
Surr: Toluene-d8	106	0	70-130		%Rec	2	9/10/2018 7:40:33 PM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.49	0.019	0.10		mg/L	2	9/10/2018 7:40:33 PM	G54032
Surr: BFB	95.7	0	70-130		%Rec	2	9/10/2018 7:40:33 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.3	0.63	1.0		mg/L	1	9/7/2018 10:27:33 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 10:27:33 AM	40147
Surr: DNOP	130	0	76.7-135		%Rec	1	9/7/2018 10:27:33 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0047	0.0092		µg/L	1	9/10/2018 4:22:41 PM	40237

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Benzoic acid	6.9	6.3	20	J	µg/L	1	9/10/2018 2:03:32 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Bis(2-ethylhexyl)phthalate	14	8.1	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 2:03:32 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 2:03:32 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 2:03:32 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 2:03:32 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 2:03:32 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 2:03:32 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 2:03:32 PM	40141
Surr: 2-Fluorophenol	34.0	0	15-74.1		%Rec	1	9/10/2018 2:03:32 PM	40141
Surr: Phenol-d5	24.9	0	15-59.8		%Rec	1	9/10/2018 2:03:32 PM	40141
Surr: 2,4,6-Tribromophenol	61.5	0	22.1-112		%Rec	1	9/10/2018 2:03:32 PM	40141
Surr: Nitrobenzene-d5	54.9	0	33.2-94		%Rec	1	9/10/2018 2:03:32 PM	40141
Surr: 2-Fluorobiphenyl	55.9	0	34-90.9		%Rec	1	9/10/2018 2:03:32 PM	40141
Surr: 4-Terphenyl-d14	94.3	0	15-149		%Rec	1	9/10/2018 2:03:32 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.22	0.15	0.50	J	mg/L	5	8/31/2018 7:47:51 PM	A53878
Chloride	93	0.59	10		mg/L	20	8/31/2018 8:00:15 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 7:47:51 PM	A53878
Bromide	0.60	0.13	0.50		mg/L	5	8/31/2018 7:47:51 PM	A53878
Nitrogen, Nitrate (As N)	0.23	0.033	0.50	J	mg/L	5	8/31/2018 7:47:51 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 7:47:51 PM	A53878
Sulfate	230	1.0	2.5		mg/L	5	8/31/2018 7:47:51 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.045	0.00099	0.0020		mg/L	1	9/25/2018 8:38:41 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:38:41 PM	A54392
Calcium	72	0.078	1.0		mg/L	1	9/20/2018 11:15:38 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:38:41 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:15:38 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:15:38 PM	B54309
Magnesium	16	0.25	1.0		mg/L	1	9/20/2018 11:15:38 PM	B54309
Manganese	0.16	0.00039	0.0020	*	mg/L	1	9/20/2018 11:15:38 PM	B54309
Potassium	1.3	0.11	1.0		mg/L	1	9/20/2018 11:15:38 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:15:38 PM	B54309
Sodium	290	0.82	5.0		mg/L	5	9/25/2018 8:40:45 PM	A54392
Zinc	0.010	0.0021	0.010		mg/L	1	9/25/2018 8:38:41 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00075	0.00042	0.0010	J	mg/L	1	9/7/2018 11:33:59 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:33:59 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:33:59 AM	B53991
Uranium	0.031	0.00048	0.0025	*	mg/L	5	9/7/2018 12:19:23 PM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-33
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 10:10:00 AM
Lab ID: 1808J13-005G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.12	0.0010	0.0020		mg/L	1	9/13/2018 8:39:46 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:39:46 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:39:46 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:39:46 PM	40309
Iron	3.1	0.051	0.10	*	mg/L	5	9/14/2018 5:42:29 PM	40309
Manganese	0.42	0.0011	0.0020	*	mg/L	1	9/13/2018 8:39:46 PM	40309
Silver	0.0013	0.0012	0.0050	J	mg/L	1	9/13/2018 8:39:46 PM	40309
Zinc	0.0091	0.0033	0.010	J	mg/L	1	9/13/2018 8:39:46 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	9/13/2018 6:25:06 PM	40309
Lead	0.0019	0.00023	0.00050		mg/L	1	9/13/2018 6:25:06 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:25:06 PM	40309
Uranium	0.032	0.00034	0.0025	*	mg/L	5	9/18/2018 1:48:53 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	9/20/2018 11:01:16 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2200	35	200		µg/L	200	9/10/2018 8:09:38 PM	W54032
Toluene	5.6	3.4	20	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
Ethylbenzene	120	4.5	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Methyl tert-butyl ether (MTBE)	5400	64	200		µg/L	200	9/10/2018 8:09:38 PM	W54032
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Naphthalene	14	5.8	40	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
1-Methylnaphthalene	42	6.7	80	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
2-Methylnaphthalene	ND	4.8	80		µg/L	20	9/10/2018 8:38:45 PM	W54032
Acetone	ND	16	200		µg/L	20	9/10/2018 8:38:45 PM	W54032
Bromobenzene	ND	6.4	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Bromodichloromethane	ND	5.7	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Bromoform	ND	6.5	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Bromomethane	ND	5.1	60		µg/L	20	9/10/2018 8:38:45 PM	W54032
2-Butanone	ND	25	200		µg/L	20	9/10/2018 8:38:45 PM	W54032
Carbon disulfide	ND	7.7	200		µg/L	20	9/10/2018 8:38:45 PM	W54032
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Chlorobenzene	ND	5.8	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Chloroethane	ND	3.3	40		µg/L	20	9/10/2018 8:38:45 PM	W54032
Chloroform	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Chloromethane	ND	5.9	60		µg/L	20	9/10/2018 8:38:45 PM	W54032
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
cis-1,2-DCE	8.0	7.5	20	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/10/2018 8:38:45 PM	W54032
Dibromochloromethane	ND	4.7	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Dibromomethane	ND	6.4	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1-Dichloroethene	8.1	2.4	20	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/10/2018 8:38:45 PM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	16	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
2-Hexanone	ND	18	200		µg/L	20	9/10/2018 8:38:45 PM	W54032
Isopropylbenzene	5.8	4.4	20	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	9/10/2018 8:38:45 PM	W54032
Methylene Chloride	ND	4.1	60		µg/L	20	9/10/2018 8:38:45 PM	W54032
n-Butylbenzene	ND	5.0	60		µg/L	20	9/10/2018 8:38:45 PM	W54032
n-Propylbenzene	13	4.9	20	J	µg/L	20	9/10/2018 8:38:45 PM	W54032
sec-Butylbenzene	ND	4.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Styrene	ND	5.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/10/2018 8:38:45 PM	W54032
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/10/2018 8:38:45 PM	W54032
Vinyl chloride	ND	2.2	20		µg/L	20	9/10/2018 8:38:45 PM	W54032
Xylenes, Total	ND	13	30		µg/L	20	9/10/2018 8:38:45 PM	W54032
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	20	9/10/2018 8:38:45 PM	W54032
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	20	9/10/2018 8:38:45 PM	W54032
Surr: Dibromofluoromethane	100	0	70-130		%Rec	20	9/10/2018 8:38:45 PM	W54032
Surr: Toluene-d8	100	0	70-130		%Rec	20	9/10/2018 8:38:45 PM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	11	0.19	1.0		mg/L	20	9/10/2018 8:38:45 PM	G54032
Surr: BFB	99.7	0	70-130		%Rec	20	9/10/2018 8:38:45 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.1	0.63	1.0		mg/L	1	9/7/2018 2:04:58 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 2:04:58 AM	40147
Surr: DNOP	131	0	76.7-135		%Rec	1	9/7/2018 2:04:58 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Benzoic acid	16	6.3	20	J	µg/L	1	9/10/2018 3:32:26 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4-Dimethylphenol	6.9	5.9	10	J	µg/L	1	9/10/2018 3:32:26 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 3:32:26 PM	40141
1-Methylnaphthalene	36	7.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 3:32:26 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 3:32:26 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Naphthalene	12	5.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 3:32:26 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 3:32:26 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Phenol	19	6.0	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 3:32:26 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 3:32:26 PM	40141
Surr: 2-Fluorophenol	44.8	0	15-74.1		%Rec	1	9/10/2018 3:32:26 PM	40141
Surr: Phenol-d5	35.4	0	15-59.8		%Rec	1	9/10/2018 3:32:26 PM	40141
Surr: 2,4,6-Tribromophenol	70.7	0	22.1-112		%Rec	1	9/10/2018 3:32:26 PM	40141
Surr: Nitrobenzene-d5	73.3	0	33.2-94		%Rec	1	9/10/2018 3:32:26 PM	40141
Surr: 2-Fluorobiphenyl	73.5	0	34-90.9		%Rec	1	9/10/2018 3:32:26 PM	40141
Surr: 4-Terphenyl-d14	102	0	15-149		%Rec	1	9/10/2018 3:32:26 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.35	0.15	0.50	J	mg/L	5	8/31/2018 8:12:40 PM	A53878
Chloride	110	0.59	10		mg/L	20	8/31/2018 8:25:05 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 8:12:40 PM	A53878
Bromide	0.80	0.13	0.50		mg/L	5	8/31/2018 8:12:40 PM	A53878
Nitrogen, Nitrate (As N)	1.7	0.033	0.50		mg/L	5	8/31/2018 8:12:40 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 8:12:40 PM	A53878
Sulfate	3.8	1.0	2.5		mg/L	5	8/31/2018 8:12:40 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.4	0.0049	0.010		mg/L	5	9/25/2018 8:44:36 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:42:42 PM	A54392
Calcium	130	0.39	5.0		mg/L	5	9/25/2018 8:44:36 PM	A54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:42:42 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:17:38 PM	B54309
Iron	3.0	0.082	0.10	*	mg/L	5	9/25/2018 8:44:36 PM	A54392
Magnesium	29	0.25	1.0		mg/L	1	9/20/2018 11:17:38 PM	B54309
Manganese	2.4	0.0020	0.010	*	mg/L	5	9/25/2018 8:44:36 PM	A54392
Potassium	0.88	0.11	1.0	J	mg/L	1	9/20/2018 11:17:38 PM	B54309
Silver	0.0025	0.0018	0.0050	J	mg/L	1	9/20/2018 11:17:38 PM	B54309
Sodium	240	0.82	5.0		mg/L	5	9/25/2018 8:44:36 PM	A54392
Zinc	0.0060	0.0021	0.010	J	mg/L	1	9/25/2018 8:42:42 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	9/7/2018 11:36:22 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:36:22 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:36:22 AM	B53991
Uranium	0.0020	0.000096	0.00050		mg/L	1	9/7/2018 11:36:22 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-22
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 11:00:00 AM
Lab ID: 1808J13-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	1.3	0.010	0.020		mg/L	10	9/14/2018 5:44:19 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:41:46 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:41:46 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:41:46 PM	40309
Iron	7.4	0.10	0.20	*	mg/L	10	9/14/2018 5:44:19 PM	40309
Manganese	2.5	0.011	0.020	*	mg/L	10	9/14/2018 5:44:19 PM	40309
Silver	0.0024	0.0012	0.0050	J	mg/L	1	9/13/2018 8:41:46 PM	40309
Zinc	0.0059	0.0033	0.010	J	mg/L	1	9/13/2018 8:41:46 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	9/13/2018 6:27:25 PM	40309
Lead	0.0020	0.00023	0.00050		mg/L	1	9/13/2018 6:27:25 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:27:25 PM	40309
Uranium	0.0024	0.000068	0.00050		mg/L	1	9/13/2018 6:27:25 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000049	0.000038	0.00020	J	mg/L	1	9/20/2018 11:03:33 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	3500	35	200		µg/L	200	9/10/2018 9:07:47 PM	W54032
Toluene	120	3.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Ethylbenzene	650	4.5	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Methyl tert-butyl ether (MTBE)	1200	6.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2,4-Trimethylbenzene	580	5.1	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,3,5-Trimethylbenzene	150	4.6	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Naphthalene	210	5.8	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
1-Methylnaphthalene	110	6.7	80		µg/L	20	9/10/2018 9:36:49 PM	W54032
2-Methylnaphthalene	130	4.8	80		µg/L	20	9/10/2018 9:36:49 PM	W54032
Acetone	17	16	200	J	µg/L	20	9/10/2018 9:36:49 PM	W54032
Bromobenzene	ND	6.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Bromodichloromethane	ND	5.7	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Bromoform	ND	6.5	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Bromomethane	ND	5.1	60		µg/L	20	9/10/2018 9:36:49 PM	W54032
2-Butanone	ND	25	200		µg/L	20	9/10/2018 9:36:49 PM	W54032
Carbon disulfide	ND	7.7	200		µg/L	20	9/10/2018 9:36:49 PM	W54032
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Chlorobenzene	ND	5.8	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Chloroethane	ND	3.3	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
Chloroform	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Chloromethane	ND	5.9	60		µg/L	20	9/10/2018 9:36:49 PM	W54032
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
cis-1,2-DCE	ND	7.5	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
Dibromochloromethane	ND	4.7	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Dibromomethane	ND	6.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1-Dichloroethene	ND	2.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/10/2018 9:36:49 PM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	16	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
2-Hexanone	ND	18	200		µg/L	20	9/10/2018 9:36:49 PM	W54032
Isopropylbenzene	29	4.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
4-Isopropyltoluene	6.5	4.8	20	J	µg/L	20	9/10/2018 9:36:49 PM	W54032
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	9/10/2018 9:36:49 PM	W54032
Methylene Chloride	ND	4.1	60		µg/L	20	9/10/2018 9:36:49 PM	W54032
n-Butylbenzene	7.0	5.0	60	J	µg/L	20	9/10/2018 9:36:49 PM	W54032
n-Propylbenzene	59	4.9	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
sec-Butylbenzene	5.8	4.0	20	J	µg/L	20	9/10/2018 9:36:49 PM	W54032
Styrene	ND	5.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/10/2018 9:36:49 PM	W54032
Vinyl chloride	ND	2.2	20		µg/L	20	9/10/2018 9:36:49 PM	W54032
Xylenes, Total	3200	13	30		µg/L	20	9/10/2018 9:36:49 PM	W54032
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	20	9/10/2018 9:36:49 PM	W54032
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	20	9/10/2018 9:36:49 PM	W54032
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	20	9/10/2018 9:36:49 PM	W54032
Surr: Toluene-d8	102	0	70-130		%Rec	20	9/10/2018 9:36:49 PM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	26	0.19	1.0		mg/L	20	9/10/2018 9:36:49 PM	G54032
Surr: BFB	96.4	0	70-130		%Rec	20	9/10/2018 9:36:49 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	5.5	0.63	1.0		mg/L	1	9/7/2018 2:26:48 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 2:26:48 AM	40147
Surr: DNOP	134	0	76.7-135		%Rec	1	9/7/2018 2:26:48 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Acenaphthylene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Aniline	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Anthracene	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Azobenzene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benz(a)anthracene	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzo(a)pyrene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzo(b)fluoranthene	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzo(g,h,i)perylene	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzo(k)fluoranthene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzoic acid	ND	13	40		µg/L	1	9/10/2018 4:02:01 PM	40141
Benzyl alcohol	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Bis(2-chloroethoxy)methane	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Bis(2-chloroethyl)ether	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Bis(2-chloroisopropyl)ether	ND	9.8	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Bis(2-ethylhexyl)phthalate	ND	16	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Bromophenyl phenyl ether	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Butyl benzyl phthalate	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Carbazole	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Chloro-3-methylphenol	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Chloroaniline	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2-Chloronaphthalene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2-Chlorophenol	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Chlorophenyl phenyl ether	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Chrysene	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Di-n-butyl phthalate	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Di-n-octyl phthalate	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Dibenz(a,h)anthracene	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Dibenzofuran	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
1,2-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
1,3-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
1,4-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
3,3´-Dichlorobenzidine	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Diethyl phthalate	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Dimethyl phthalate	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4-Dichlorophenol	ND	12	40		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4-Dimethylphenol	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4,6-Dinitro-2-methylphenol	ND	11	40		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4-Dinitrophenol	ND	7.4	40		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4-Dinitrotoluene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Fluoranthene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Fluorene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Hexachlorobenzene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Hexachlorobutadiene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Hexachlorocyclopentadiene	ND	7.9	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Hexachloroethane	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Indeno(1,2,3-cd)pyrene	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Isophorone	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
1-Methylnaphthalene	41	8.2	12	H	µg/L	1	9/21/2018 1:16:15 AM	40294
2-Methylnaphthalene	46	7.4	12	H	µg/L	1	9/21/2018 1:16:15 AM	40294
2-Methylphenol	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
3+4-Methylphenol	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
N-Nitrosodi-n-propylamine	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
N-Nitrosodimethylamine	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
N-Nitrosodiphenylamine	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Naphthalene	57	5.9	12	H	µg/L	1	9/21/2018 1:16:15 AM	40294
2-Nitroaniline	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
3-Nitroaniline	ND	14	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Nitroaniline	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Nitrobenzene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2-Nitrophenol	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
4-Nitrophenol	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Pentachlorophenol	ND	11	40		µg/L	1	9/10/2018 4:02:01 PM	40141
Phenanthrene	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Phenol	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Pyrene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Pyridine	ND	11	20		µg/L	1	9/10/2018 4:02:01 PM	40141
1,2,4-Trichlorobenzene	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4,5-Trichlorophenol	ND	12	20		µg/L	1	9/10/2018 4:02:01 PM	40141
2,4,6-Trichlorophenol	ND	13	20		µg/L	1	9/10/2018 4:02:01 PM	40141
Surr: 2-Fluorophenol	0	0	15-74.1	S	%Rec	1	9/10/2018 4:02:01 PM	40141
Surr: Phenol-d5	0	0	15-59.8	S	%Rec	1	9/10/2018 4:02:01 PM	40141
Surr: 2,4,6-Tribromophenol	0.840	0	22.1-112	S	%Rec	1	9/10/2018 4:02:01 PM	40141
Surr: Nitrobenzene-d5	5.76	0	33.2-94	S	%Rec	1	9/10/2018 4:02:01 PM	40141
Surr: 2-Fluorobiphenyl	2.52	0	34-90.9	S	%Rec	1	9/10/2018 4:02:01 PM	40141
Surr: 4-Terphenyl-d14	5.16	0	15-149	S	%Rec	1	9/10/2018 4:02:01 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.28	0.15	0.50	J	mg/L	5	8/31/2018 8:37:29 PM	A53878
Chloride	210	0.59	10		mg/L	20	8/31/2018 8:49:55 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 8:37:29 PM	A53878
Bromide	1.1	0.13	0.50		mg/L	5	8/31/2018 8:37:29 PM	A53878
Nitrogen, Nitrate (As N)	0.12	0.033	0.50	J	mg/L	5	8/31/2018 8:37:29 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 8:37:29 PM	A53878
Sulfate	ND	1.0	2.5		mg/L	5	8/31/2018 8:37:29 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	5.8	0.0099	0.020	*	mg/L	10	10/1/2018 11:37:47 AM	A54547
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:46:42 PM	A54392
Calcium	240	0.78	10		mg/L	10	10/1/2018 11:37:47 AM	A54547
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:46:42 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:19:30 PM	B54309
Iron	16	0.33	0.40	*	mg/L	20	10/2/2018 8:13:17 PM	A54598
Magnesium	41	0.25	1.0		mg/L	1	9/25/2018 8:46:42 PM	A54392
Manganese	5.1	0.0039	0.020	*	mg/L	10	10/1/2018 11:37:47 AM	A54547
Potassium	0.35	0.11	1.0	J	mg/L	1	9/25/2018 8:46:42 PM	A54392
Silver	0.0035	0.0018	0.0050	J	mg/L	1	9/20/2018 11:19:30 PM	B54309
Sodium	160	0.82	5.0		mg/L	5	9/25/2018 8:48:38 PM	A54392
Zinc	0.011	0.0021	0.010		mg/L	1	9/25/2018 8:46:42 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0034	0.00042	0.0010		mg/L	1	9/7/2018 11:38:46 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:38:46 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:38:46 AM	B53991
Uranium	0.00031	0.000096	0.00050	J	mg/L	1	9/7/2018 11:38:46 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018 12:30:00 PM
Lab ID: 1808J13-007F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	5.8	0.020	0.040	*	mg/L	20	9/14/2018 5:46:19 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:43:45 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:43:45 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:43:45 PM	40309
Iron	19	0.20	0.40	*	mg/L	20	9/14/2018 5:46:19 PM	40309
Manganese	4.7	0.022	0.040	*	mg/L	20	9/14/2018 5:46:19 PM	40309
Silver	0.0042	0.0012	0.0050	J	mg/L	1	9/13/2018 8:43:45 PM	40309
Zinc	0.0068	0.0033	0.010	J	mg/L	1	9/13/2018 8:43:45 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0047	0.00041	0.0010		mg/L	1	9/13/2018 6:34:18 PM	40309
Lead	0.00063	0.00023	0.00050		mg/L	1	9/13/2018 6:34:18 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:34:18 PM	40309
Uranium	0.00029	0.000068	0.00050	J	mg/L	1	9/13/2018 6:34:18 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000038	0.000038	0.00020	J	mg/L	1	9/20/2018 11:05:51 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Toluene	ND	0.17	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Methyl tert-butyl ether (MTBE)	530	3.2	10		µg/L	10	9/11/2018 11:29:17 AM	W54084
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Naphthalene	ND	0.29	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Acetone	1.7	0.79	10	J	µg/L	1	9/11/2018 4:25:34 AM	W54032
Bromobenzene	ND	0.32	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Bromoform	ND	0.32	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Bromomethane	ND	0.26	3.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
2-Butanone	ND	1.3	10		µg/L	1	9/11/2018 4:25:34 AM	W54032
Carbon disulfide	ND	0.39	10		µg/L	1	9/11/2018 4:25:34 AM	W54032
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Chloroethane	ND	0.16	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Chloroform	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Chloromethane	ND	0.29	3.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Dibromomethane	ND	0.32	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
2-Hexanone	ND	0.91	10		µg/L	1	9/11/2018 4:25:34 AM	W54032
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/11/2018 4:25:34 AM	W54032
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Styrene	ND	0.25	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/11/2018 4:25:34 AM	W54032
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/11/2018 4:25:34 AM	W54032
Surr: 1,2-Dichloroethane-d4	98.3	0	70-130		%Rec	1	9/11/2018 4:25:34 AM	W54032
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	9/11/2018 4:25:34 AM	W54032
Surr: Dibromofluoromethane	97.8	0	70-130		%Rec	1	9/11/2018 4:25:34 AM	W54032
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	9/11/2018 4:25:34 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.48	0.0097	0.050		mg/L	1	9/11/2018 4:25:34 AM	G54032
Surr: BFB	96.0	0	70-130		%Rec	1	9/11/2018 4:25:34 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.8	0.63	1.0		mg/L	1	9/7/2018 2:48:54 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 2:48:54 AM	40147
Surr: DNOP	138	0	76.7-135	S	%Rec	1	9/7/2018 2:48:54 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/10/2018 5:08:19 PM	40237

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Benzoic acid	7.5	6.3	20	J	µg/L	1	9/10/2018 4:31:34 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 4:31:34 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 4:31:34 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 4:31:34 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 4:31:34 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 4:31:34 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 4:31:34 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 4:31:34 PM	40141
Surr: 2-Fluorophenol	26.2	0	15-74.1		%Rec	1	9/10/2018 4:31:34 PM	40141
Surr: Phenol-d5	19.5	0	15-59.8		%Rec	1	9/10/2018 4:31:34 PM	40141
Surr: 2,4,6-Tribromophenol	55.1	0	22.1-112		%Rec	1	9/10/2018 4:31:34 PM	40141
Surr: Nitrobenzene-d5	40.9	0	33.2-94		%Rec	1	9/10/2018 4:31:34 PM	40141
Surr: 2-Fluorobiphenyl	46.3	0	34-90.9		%Rec	1	9/10/2018 4:31:34 PM	40141
Surr: 4-Terphenyl-d14	86.5	0	15-149		%Rec	1	9/10/2018 4:31:34 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.21	0.15	0.50	J	mg/L	5	8/31/2018 9:02:19 PM	A53878
Chloride	95	0.59	10		mg/L	20	8/31/2018 9:14:44 PM	A53878
Bromide	0.59	0.13	0.50		mg/L	5	8/31/2018 9:02:19 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 9:02:19 PM	A53878
Sulfate	250	1.0	2.5		mg/L	5	8/31/2018 9:02:19 PM	A53878
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/18/2018 7:11:39 PM	R54253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.046	0.00099	0.0020		mg/L	1	9/25/2018 8:50:38 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:50:38 PM	A54392
Calcium	69	0.078	1.0		mg/L	1	9/20/2018 11:21:24 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 8:50:38 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:21:24 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:21:24 PM	B54309
Magnesium	16	0.25	1.0		mg/L	1	9/20/2018 11:21:24 PM	B54309
Manganese	0.16	0.00039	0.0020	*	mg/L	1	9/20/2018 11:21:24 PM	B54309
Potassium	1.1	0.11	1.0		mg/L	1	9/20/2018 11:21:24 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:21:24 PM	B54309
Sodium	280	0.82	5.0		mg/L	5	9/25/2018 8:52:43 PM	A54392
Zinc	0.012	0.0021	0.010		mg/L	1	9/25/2018 8:50:38 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00072	0.00042	0.0010	J	mg/L	1	9/7/2018 11:41:08 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:41:08 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:41:08 AM	B53991
Uranium	0.031	0.00048	0.0025	*	mg/L	5	9/7/2018 12:21:46 PM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/30/2018
Lab ID: 1808J13-008G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.12	0.0010	0.0020		mg/L	1	9/13/2018 8:45:46 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:45:46 PM	40309
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	9/13/2018 8:45:46 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:45:46 PM	40309
Iron	3.3	0.051	0.10	*	mg/L	5	9/14/2018 5:50:26 PM	40309
Manganese	0.45	0.0011	0.0020	*	mg/L	1	9/13/2018 8:45:46 PM	40309
Silver	0.0019	0.0012	0.0050	J	mg/L	1	9/13/2018 8:45:46 PM	40309
Zinc	0.0095	0.0033	0.010	J	mg/L	1	9/13/2018 8:45:46 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	9/13/2018 6:36:36 PM	40309
Lead	0.0020	0.00023	0.00050		mg/L	1	9/13/2018 6:36:36 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:36:36 PM	40309
Uranium	0.032	0.00034	0.0025	*	mg/L	5	9/18/2018 1:51:10 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000057	0.000038	0.00020	J	mg/L	1	9/20/2018 11:08:09 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	1.7	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Toluene	ND	1.7	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Ethylbenzene	ND	2.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Methyl tert-butyl ether (MTBE)	ND	3.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2,4-Trimethylbenzene	ND	2.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,3,5-Trimethylbenzene	ND	2.3	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2-Dichloroethane (EDC)	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2-Dibromoethane (EDB)	ND	2.3	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Naphthalene	ND	2.9	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1-Methylnaphthalene	ND	3.4	40	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
2-Methylnaphthalene	ND	2.4	40	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Acetone	1200	7.9	100	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Bromobenzene	ND	3.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Bromodichloromethane	ND	2.8	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Bromoform	ND	3.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Bromomethane	ND	2.6	30	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
2-Butanone	170	13	100	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Carbon disulfide	ND	3.9	100	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Carbon Tetrachloride	ND	1.3	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Chlorobenzene	ND	2.9	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Chloroethane	ND	1.6	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Chloroform	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Chloromethane	ND	2.9	30	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
2-Chlorotoluene	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
4-Chlorotoluene	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
cis-1,2-DCE	ND	3.8	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
cis-1,3-Dichloropropene	ND	3.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2-Dibromo-3-chloropropane	ND	4.7	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Dibromochloromethane	ND	2.4	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Dibromomethane	ND	3.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2-Dichlorobenzene	ND	3.1	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,3-Dichlorobenzene	ND	3.1	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,4-Dichlorobenzene	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Dichlorodifluoromethane	ND	10	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1-Dichloroethane	ND	4.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1-Dichloroethene	ND	1.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2-Dichloropropane	ND	1.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,3-Dichloropropane	ND	2.7	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
2,2-Dichloropropane	ND	1.8	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1-Dichloropropene	ND	1.6	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	8.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
2-Hexanone	ND	9.1	100	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Isopropylbenzene	ND	2.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
4-Isopropyltoluene	ND	2.4	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
4-Methyl-2-pentanone	ND	4.5	100	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Methylene Chloride	ND	2.1	30	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
n-Butylbenzene	ND	2.5	30	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
n-Propylbenzene	ND	2.4	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
sec-Butylbenzene	ND	2.0	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Styrene	ND	2.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
tert-Butylbenzene	ND	2.2	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1,1,2-Tetrachloroethane	ND	2.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1,2,2-Tetrachloroethane	ND	3.3	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Tetrachloroethene (PCE)	ND	1.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
trans-1,2-DCE	ND	1.8	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
trans-1,3-Dichloropropene	ND	2.8	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2,3-Trichlorobenzene	ND	2.8	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2,4-Trichlorobenzene	ND	2.7	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1,1-Trichloroethane	ND	1.5	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,1,2-Trichloroethane	ND	2.3	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Trichloroethene (TCE)	ND	2.6	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Trichlorofluoromethane	ND	1.7	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
1,2,3-Trichloropropane	ND	5.7	20	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Vinyl chloride	ND	1.1	10	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Xylenes, Total	ND	6.4	15	D	µg/L	10	9/7/2018 10:27:48 PM	W54008
Surr: 1,2-Dichloroethane-d4	109	0	70-130	D	%Rec	10	9/7/2018 10:27:48 PM	W54008
Surr: 4-Bromofluorobenzene	112	0	70-130	D	%Rec	10	9/7/2018 10:27:48 PM	W54008
Surr: Dibromofluoromethane	110	0	70-130	D	%Rec	10	9/7/2018 10:27:48 PM	W54008
Surr: Toluene-d8	109	0	70-130	D	%Rec	10	9/7/2018 10:27:48 PM	W54008
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.29	0.097	0.50	JD	mg/L	10	9/10/2018 6:41:29 PM	G54032
Surr: BFB	100	0	70-130	D	%Rec	10	9/10/2018 6:41:29 PM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.7	0.63	1.0		mg/L	1	9/7/2018 11:11:49 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 11:11:49 AM	40147
Surr: DNOP	135	0	76.7-135		%Rec	1	9/7/2018 11:11:49 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	1500	2.0	2.0		mg/L	1	9/5/2018 3:37:00 PM	40097

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	2730	100	100	*D	mg/L	1	9/7/2018 12:46:00 PM	40157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	9/25/2018 8:54:40 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 8:54:40 PM	A54392
Chromium	0.0023	0.0013	0.0060	J	mg/L	1	9/25/2018 8:54:40 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:23:24 PM	B54309
Iron	0.17	0.016	0.020		mg/L	1	9/25/2018 8:54:40 PM	A54392
Manganese	0.36	0.00039	0.0020	*	mg/L	1	9/20/2018 11:23:24 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:23:24 PM	B54309
Zinc	0.017	0.0021	0.010		mg/L	1	9/25/2018 8:54:40 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0075	0.0021	0.0050		mg/L	5	9/7/2018 11:43:34 AM	B53991
Lead	ND	0.00087	0.0025		mg/L	5	9/7/2018 11:43:34 AM	B53991
Selenium	0.014	0.0038	0.0050		mg/L	5	9/7/2018 11:43:34 AM	B53991
Uranium	ND	0.00048	0.0025		mg/L	5	9/7/2018 11:43:34 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1 to EP-2
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 8:20:00 AM
Lab ID: 1808J13-009F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.18	0.0010	0.0020		mg/L	1	9/13/2018 8:47:44 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:47:44 PM	40309
Chromium	0.0025	0.0018	0.0060	J	mg/L	1	9/13/2018 8:47:44 PM	40309
Copper	0.012	0.0041	0.0060		mg/L	1	9/13/2018 8:47:44 PM	40309
Iron	0.36	0.010	0.020	*	mg/L	1	9/13/2018 8:47:44 PM	40309
Manganese	0.40	0.0011	0.0020	*	mg/L	1	9/13/2018 8:47:44 PM	40309
Silver	0.0022	0.0012	0.0050	J	mg/L	1	9/13/2018 8:47:44 PM	40309
Zinc	0.026	0.0033	0.010		mg/L	1	9/13/2018 8:47:44 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0087	0.0021	0.0050		mg/L	5	9/14/2018 7:10:55 PM	40309
Lead	0.00030	0.00023	0.00050	J	mg/L	1	9/13/2018 6:38:54 PM	40309
Selenium	0.0084	0.0049	0.0050		mg/L	5	9/14/2018 7:10:55 PM	40309
Uranium	0.00030	0.000068	0.00050	J	mg/L	1	9/13/2018 6:38:54 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000095	0.000038	0.00020	J	mg/L	1	9/20/2018 11:10:32 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Toluene	ND	0.17	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Naphthalene	ND	0.29	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Acetone	20	0.79	10		µg/L	1	9/11/2018 4:54:48 AM	W54032
Bromobenzene	ND	0.32	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Bromoform	ND	0.32	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Bromomethane	ND	0.26	3.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
2-Butanone	1.5	1.3	10	J	µg/L	1	9/11/2018 4:54:48 AM	W54032
Carbon disulfide	ND	0.39	10		µg/L	1	9/11/2018 4:54:48 AM	W54032
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Chloroethane	ND	0.16	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Chloroform	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Chloromethane	ND	0.29	3.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Dibromomethane	ND	0.32	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
2-Hexanone	ND	0.91	10		µg/L	1	9/11/2018 4:54:48 AM	W54032
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/11/2018 4:54:48 AM	W54032
Methylene Chloride	0.37	0.21	3.0	J	µg/L	1	9/11/2018 4:54:48 AM	W54032
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Styrene	ND	0.25	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/11/2018 4:54:48 AM	W54032
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/11/2018 4:54:48 AM	W54032
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	9/11/2018 4:54:48 AM	W54032
Surr: 4-Bromofluorobenzene	97.2	0	70-130		%Rec	1	9/11/2018 4:54:48 AM	W54032
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	9/11/2018 4:54:48 AM	W54032
Surr: Toluene-d8	100	0	70-130		%Rec	1	9/11/2018 4:54:48 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.021	0.0097	0.050	J	mg/L	1	9/11/2018 4:54:48 AM	G54032
Surr: BFB	90.0	0	70-130		%Rec	1	9/11/2018 4:54:48 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/7/2018 3:32:47 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 3:32:47 AM	40147
Surr: DNOP	136	0	76.7-135	S	%Rec	1	9/7/2018 3:32:47 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/10/2018 5:01:09 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 5:01:09 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 5:01:09 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 5:01:09 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 5:01:09 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 5:01:09 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 5:01:09 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 5:01:09 PM	40141
Surr: 2-Fluorophenol	37.2	0	15-74.1		%Rec	1	9/10/2018 5:01:09 PM	40141
Surr: Phenol-d5	28.0	0	15-59.8		%Rec	1	9/10/2018 5:01:09 PM	40141
Surr: 2,4,6-Tribromophenol	55.8	0	22.1-112		%Rec	1	9/10/2018 5:01:09 PM	40141
Surr: Nitrobenzene-d5	55.5	0	33.2-94		%Rec	1	9/10/2018 5:01:09 PM	40141
Surr: 2-Fluorobiphenyl	55.9	0	34-90.9		%Rec	1	9/10/2018 5:01:09 PM	40141
Surr: 4-Terphenyl-d14	36.6	0	15-149		%Rec	1	9/10/2018 5:01:09 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 9:27:09 PM	A53878
Chloride	ND	0.029	0.50		mg/L	1	8/31/2018 9:27:09 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/31/2018 9:27:09 PM	A53878
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 9:27:09 PM	A53878
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	8/31/2018 9:27:09 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/31/2018 9:27:09 PM	A53878
Sulfate	ND	0.21	0.50		mg/L	1	8/31/2018 9:27:09 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 9:03:15 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:03:15 PM	A54392
Calcium	ND	0.078	1.0		mg/L	1	9/20/2018 11:32:45 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:03:15 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:32:45 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:32:45 PM	B54309
Magnesium	ND	0.25	1.0		mg/L	1	9/20/2018 11:32:45 PM	B54309
Manganese	ND	0.00039	0.0020		mg/L	1	9/20/2018 11:32:45 PM	B54309
Potassium	0.36	0.11	1.0	J	mg/L	1	9/20/2018 11:32:45 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:32:45 PM	B54309
Sodium	0.55	0.16	1.0	J	mg/L	1	9/20/2018 11:32:45 PM	B54309
Zinc	0.0055	0.0021	0.010	J	mg/L	1	9/25/2018 9:03:15 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/7/2018 11:50:45 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:50:45 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:50:45 AM	B53991
Uranium	ND	0.000096	0.00050		mg/L	1	9/7/2018 11:50:45 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:25:00 AM
Lab ID: 1808J13-010F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 8:49:54 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:49:54 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:49:54 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:49:54 PM	40309
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 8:49:54 PM	40309
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 8:49:54 PM	40309
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 8:49:54 PM	40309
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 8:49:54 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/13/2018 6:41:11 PM	40309
Lead	ND	0.00023	0.00050		mg/L	1	9/13/2018 6:41:11 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:41:11 PM	40309
Uranium	ND	0.000068	0.00050		mg/L	1	9/13/2018 6:41:11 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/20/2018 11:12:43 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Toluene	ND	0.17	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Naphthalene	ND	0.29	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Acetone	1.8	0.79	10	J	µg/L	1	9/11/2018 5:24:00 AM	W54032
Bromobenzene	ND	0.32	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Bromoform	ND	0.32	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Bromomethane	ND	0.26	3.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
2-Butanone	ND	1.3	10		µg/L	1	9/11/2018 5:24:00 AM	W54032
Carbon disulfide	ND	0.39	10		µg/L	1	9/11/2018 5:24:00 AM	W54032
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Chloroethane	ND	0.16	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Chloroform	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Chloromethane	ND	0.29	3.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Dibromomethane	ND	0.32	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
2-Hexanone	ND	0.91	10		µg/L	1	9/11/2018 5:24:00 AM	W54032
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/11/2018 5:24:00 AM	W54032
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Styrene	ND	0.25	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/11/2018 5:24:00 AM	W54032
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/11/2018 5:24:00 AM	W54032
Surr: 1,2-Dichloroethane-d4	95.5	0	70-130		%Rec	1	9/11/2018 5:24:00 AM	W54032
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/11/2018 5:24:00 AM	W54032
Surr: Dibromofluoromethane	94.9	0	70-130		%Rec	1	9/11/2018 5:24:00 AM	W54032
Surr: Toluene-d8	100	0	70-130		%Rec	1	9/11/2018 5:24:00 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/11/2018 5:24:00 AM	G54032
Surr: BFB	97.0	0	70-130		%Rec	1	9/11/2018 5:24:00 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.93	0.63	1.0	J	mg/L	1	9/7/2018 11:55:40 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 11:55:40 AM	40147
Surr: DNOP	135	0	76.7-135		%Rec	1	9/7/2018 11:55:40 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Benzoic acid	9.8	6.3	20	J	µg/L	1	9/10/2018 5:30:34 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 5:30:34 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 5:30:34 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 5:30:34 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Naphthalene	ND	5.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 5:30:34 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 5:30:34 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 5:30:34 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 5:30:34 PM	40141
Surr: 2-Fluorophenol	44.8	0	15-74.1		%Rec	1	9/10/2018 5:30:34 PM	40141
Surr: Phenol-d5	35.4	0	15-59.8		%Rec	1	9/10/2018 5:30:34 PM	40141
Surr: 2,4,6-Tribromophenol	69.3	0	22.1-112		%Rec	1	9/10/2018 5:30:34 PM	40141
Surr: Nitrobenzene-d5	70.7	0	33.2-94		%Rec	1	9/10/2018 5:30:34 PM	40141
Surr: 2-Fluorobiphenyl	67.2	0	34-90.9		%Rec	1	9/10/2018 5:30:34 PM	40141
Surr: 4-Terphenyl-d14	45.4	0	15-149		%Rec	1	9/10/2018 5:30:34 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	8/31/2018 10:16:48 PM	A53878
Chloride	ND	0.029	0.50		mg/L	1	8/31/2018 10:16:48 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	8/31/2018 10:16:48 PM	A53878
Bromide	ND	0.027	0.10		mg/L	1	8/31/2018 10:16:48 PM	A53878
Nitrogen, Nitrate (As N)	0.053	0.0066	0.10	J	mg/L	1	8/31/2018 10:16:48 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	8/31/2018 10:16:48 PM	A53878
Sulfate	0.90	0.21	0.50		mg/L	1	8/31/2018 10:16:48 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 9:05:26 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:05:26 PM	A54392
Calcium	ND	0.078	1.0		mg/L	1	9/20/2018 11:34:40 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:05:26 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:34:40 PM	B54309
Iron	ND	0.016	0.020		mg/L	1	9/20/2018 11:34:40 PM	B54309
Magnesium	ND	0.25	1.0		mg/L	1	9/20/2018 11:34:40 PM	B54309
Manganese	ND	0.00039	0.0020		mg/L	1	9/20/2018 11:34:40 PM	B54309
Potassium	0.25	0.11	1.0	J	mg/L	1	9/20/2018 11:34:40 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:34:40 PM	B54309
Sodium	0.89	0.16	1.0	J	mg/L	1	9/20/2018 11:34:40 PM	B54309
Zinc	0.010	0.0021	0.010		mg/L	1	9/25/2018 9:05:26 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/7/2018 11:53:08 AM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 11:53:08 AM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 11:53:08 AM	B53991
Uranium	ND	0.000096	0.00050		mg/L	1	9/7/2018 11:53:08 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 9:45:00 AM
Lab ID: 1808J13-011F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 8:52:06 PM	40309
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 8:52:06 PM	40309
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 8:52:06 PM	40309
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 8:52:06 PM	40309
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 8:52:06 PM	40309
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 8:52:06 PM	40309
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 8:52:06 PM	40309
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 8:52:06 PM	40309
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/13/2018 6:43:29 PM	40309
Lead	ND	0.00023	0.00050		mg/L	1	9/13/2018 6:43:29 PM	40309
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:43:29 PM	40309
Uranium	ND	0.000068	0.00050		mg/L	1	9/13/2018 6:43:29 PM	40309
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000043	0.000038	0.00020	J	mg/L	1	9/20/2018 11:14:54 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	5900	35	200		µg/L	200	9/11/2018 12:02:30 AM	W54032
Toluene	13	3.4	20	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
Ethylbenzene	800	4.5	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Methyl tert-butyl ether (MTBE)	500	6.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2,4-Trimethylbenzene	370	5.1	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,3,5-Trimethylbenzene	100	4.6	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Naphthalene	90	5.8	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
1-Methylnaphthalene	12	6.7	80	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
2-Methylnaphthalene	12	4.8	80	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
Acetone	72	16	200	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
Bromobenzene	ND	6.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Bromodichloromethane	ND	5.7	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Bromoform	ND	6.5	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Bromomethane	ND	5.1	60		µg/L	20	9/11/2018 12:32:03 AM	W54032
2-Butanone	ND	25	200		µg/L	20	9/11/2018 12:32:03 AM	W54032
Carbon disulfide	ND	7.7	200		µg/L	20	9/11/2018 12:32:03 AM	W54032
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Chlorobenzene	ND	5.8	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Chloroethane	ND	3.3	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
Chloroform	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Chloromethane	ND	5.9	60		µg/L	20	9/11/2018 12:32:03 AM	W54032
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
cis-1,2-DCE	ND	7.5	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
Dibromochloromethane	ND	4.7	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Dibromomethane	ND	6.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1-Dichloroethene	ND	2.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/11/2018 12:32:03 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	16	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
2-Hexanone	ND	18	200		µg/L	20	9/11/2018 12:32:03 AM	W54032
Isopropylbenzene	20	4.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
4-Methyl-2-pentanone	18	9.1	200	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
Methylene Chloride	ND	4.1	60		µg/L	20	9/11/2018 12:32:03 AM	W54032
n-Butylbenzene	5.3	5.0	60	J	µg/L	20	9/11/2018 12:32:03 AM	W54032
n-Propylbenzene	42	4.9	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
sec-Butylbenzene	ND	4.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Styrene	ND	5.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/11/2018 12:32:03 AM	W54032
Vinyl chloride	ND	2.2	20		µg/L	20	9/11/2018 12:32:03 AM	W54032
Xylenes, Total	990	13	30		µg/L	20	9/11/2018 12:32:03 AM	W54032
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	20	9/11/2018 12:32:03 AM	W54032
Surr: 4-Bromofluorobenzene	91.6	0	70-130		%Rec	20	9/11/2018 12:32:03 AM	W54032
Surr: Dibromofluoromethane	100	0	70-130		%Rec	20	9/11/2018 12:32:03 AM	W54032
Surr: Toluene-d8	101	0	70-130		%Rec	20	9/11/2018 12:32:03 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	22	0.19	1.0		mg/L	20	9/11/2018 12:32:03 AM	G54032
Surr: BFB	89.4	0	70-130		%Rec	20	9/11/2018 12:32:03 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.9	0.63	1.0		mg/L	1	9/7/2018 4:16:49 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 4:16:49 AM	40147
Surr: DNOP	135	0	76.7-135		%Rec	1	9/7/2018 4:16:49 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Acenaphthylene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Aniline	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Anthracene	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Azobenzene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benz(a)anthracene	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benzo(a)pyrene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benzo(b)fluoranthene	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benzo(g,h,i)perylene	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benzo(k)fluoranthene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Benzoic acid	13	13	40	J	µg/L	1	9/10/2018 6:00:15 PM	40141
Benzyl alcohol	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Bis(2-chloroethoxy)methane	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Bis(2-chloroethyl)ether	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Bis(2-chloroisopropyl)ether	ND	9.8	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Bis(2-ethylhexyl)phthalate	ND	16	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Bromophenyl phenyl ether	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Butyl benzyl phthalate	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Carbazole	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Chloro-3-methylphenol	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Chloroaniline	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Chloronaphthalene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Chlorophenol	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Chlorophenyl phenyl ether	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Chrysene	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Di-n-butyl phthalate	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Di-n-octyl phthalate	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Dibenz(a,h)anthracene	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Dibenzofuran	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
1,2-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
1,3-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
1,4-Dichlorobenzene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
3,3´-Dichlorobenzidine	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Diethyl phthalate	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Dimethyl phthalate	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4-Dichlorophenol	ND	12	40		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4-Dimethylphenol	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4,6-Dinitro-2-methylphenol	ND	11	40		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4-Dinitrophenol	ND	7.4	40		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4-Dinitrotoluene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Fluoranthene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Fluorene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Hexachlorobenzene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Hexachlorobutadiene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Hexachlorocyclopentadiene	ND	7.9	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Hexachloroethane	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Indeno(1,2,3-cd)pyrene	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Isophorone	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
1-Methylnaphthalene	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Methylnaphthalene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Methylphenol	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
3+4-Methylphenol	16	11	20	J	µg/L	1	9/10/2018 6:00:15 PM	40141
N-Nitrosodi-n-propylamine	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
N-Nitrosodimethylamine	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
N-Nitrosodiphenylamine	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Naphthalene	ND	10	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Nitroaniline	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
3-Nitroaniline	ND	14	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Nitroaniline	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Nitrobenzene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2-Nitrophenol	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
4-Nitrophenol	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Pentachlorophenol	ND	11	40		µg/L	1	9/10/2018 6:00:15 PM	40141
Phenanthrene	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Phenol	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Pyrene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Pyridine	ND	11	20		µg/L	1	9/10/2018 6:00:15 PM	40141
1,2,4-Trichlorobenzene	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4,5-Trichlorophenol	ND	12	20		µg/L	1	9/10/2018 6:00:15 PM	40141
2,4,6-Trichlorophenol	ND	13	20		µg/L	1	9/10/2018 6:00:15 PM	40141
Surr: 2-Fluorophenol	43.8	0	15-74.1		%Rec	1	9/10/2018 6:00:15 PM	40141
Surr: Phenol-d5	39.1	0	15-59.8		%Rec	1	9/10/2018 6:00:15 PM	40141
Surr: 2,4,6-Tribromophenol	80.3	0	22.1-112		%Rec	1	9/10/2018 6:00:15 PM	40141
Surr: Nitrobenzene-d5	68.4	0	33.2-94		%Rec	1	9/10/2018 6:00:15 PM	40141
Surr: 2-Fluorobiphenyl	75.7	0	34-90.9		%Rec	1	9/10/2018 6:00:15 PM	40141
Surr: 4-Terphenyl-d14	60.0	0	15-149		%Rec	1	9/10/2018 6:00:15 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.43	0.16	0.50	J	mg/L	5	9/18/2018 8:42:19 PM	R54253
Chloride	330	0.59	10		mg/L	20	8/31/2018 11:18:50 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 11:06:25 PM	A53878
Bromide	2.0	0.13	0.50		mg/L	5	8/31/2018 11:06:25 PM	A53878
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/31/2018 11:06:25 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 11:06:25 PM	A53878
Sulfate	7.1	1.0	2.5		mg/L	5	8/31/2018 11:06:25 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.1	0.0049	0.010	*	mg/L	5	9/25/2018 9:09:31 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:07:35 PM	A54392
Calcium	190	0.39	5.0		mg/L	5	9/25/2018 9:09:31 PM	A54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:07:35 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:36:33 PM	B54309
Iron	16	0.33	0.40	*	mg/L	20	9/25/2018 9:11:26 PM	A54392
Magnesium	29	0.25	1.0		mg/L	1	9/20/2018 11:36:33 PM	B54309
Manganese	3.6	0.0020	0.010	*	mg/L	5	9/25/2018 9:09:31 PM	A54392
Potassium	21	0.11	1.0		mg/L	1	9/20/2018 11:36:33 PM	B54309
Silver	0.0023	0.0018	0.0050	J	mg/L	1	9/20/2018 11:36:33 PM	B54309
Sodium	210	0.82	5.0		mg/L	5	9/25/2018 9:09:31 PM	A54392
Zinc	0.014	0.0021	0.010		mg/L	1	9/25/2018 9:07:35 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.020	0.0021	0.0050	*	mg/L	5	9/7/2018 11:55:31 AM	B53991
Lead	ND	0.00087	0.0025		mg/L	5	9/7/2018 11:55:31 AM	B53991
Selenium	ND	0.0038	0.0050		mg/L	5	9/7/2018 11:55:31 AM	B53991
Uranium	0.0011	0.00048	0.0025	J	mg/L	5	9/7/2018 11:55:31 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-21
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 10:20:00 AM
Lab ID: 1808J13-012F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	4.1	0.0050	0.010	*	mg/L	5	9/14/2018 6:04:36 PM	40310
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:00:53 PM	40310
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:00:53 PM	40310
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:00:53 PM	40310
Iron	18	0.20	0.40	*	mg/L	20	9/14/2018 6:09:54 PM	40310
Manganese	3.7	0.0055	0.010	*	mg/L	5	9/14/2018 6:04:36 PM	40310
Silver	0.0024	0.0012	0.0050	J	mg/L	1	9/13/2018 9:00:53 PM	40310
Zinc	0.015	0.0033	0.010		mg/L	1	9/18/2018 4:51:15 PM	40395
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.023	0.00041	0.0010	*	mg/L	1	9/13/2018 7:18:01 PM	40310
Lead	0.0014	0.00023	0.00050		mg/L	1	9/13/2018 7:18:01 PM	40310
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 7:18:01 PM	40310
Uranium	0.0020	0.000068	0.00050		mg/L	1	9/13/2018 7:18:01 PM	40310
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	9/20/2018 11:17:07 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	5900	35	200		µg/L	200	9/11/2018 1:01:19 AM	W54032
Toluene	13	3.4	20	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
Ethylbenzene	810	4.5	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Methyl tert-butyl ether (MTBE)	480	6.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2,4-Trimethylbenzene	410	5.1	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,3,5-Trimethylbenzene	110	4.6	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Naphthalene	92	5.8	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
1-Methylnaphthalene	11	6.7	80	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
2-Methylnaphthalene	12	4.8	80	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
Acetone	62	16	200	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
Bromobenzene	ND	6.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Bromodichloromethane	ND	5.7	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Bromoform	ND	6.5	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Bromomethane	ND	5.1	60		µg/L	20	9/11/2018 1:30:26 AM	W54032
2-Butanone	ND	25	200		µg/L	20	9/11/2018 1:30:26 AM	W54032
Carbon disulfide	ND	7.7	200		µg/L	20	9/11/2018 1:30:26 AM	W54032
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Chlorobenzene	ND	5.8	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Chloroethane	ND	3.3	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
Chloroform	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Chloromethane	ND	5.9	60		µg/L	20	9/11/2018 1:30:26 AM	W54032
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
cis-1,2-DCE	ND	7.5	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
Dibromochloromethane	ND	4.7	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Dibromomethane	ND	6.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1-Dichloroethane	ND	8.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1-Dichloroethene	ND	2.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/11/2018 1:30:26 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	16	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
2-Hexanone	ND	18	200		µg/L	20	9/11/2018 1:30:26 AM	W54032
Isopropylbenzene	21	4.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
4-Methyl-2-pentanone	16	9.1	200	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
Methylene Chloride	ND	4.1	60		µg/L	20	9/11/2018 1:30:26 AM	W54032
n-Butylbenzene	5.2	5.0	60	J	µg/L	20	9/11/2018 1:30:26 AM	W54032
n-Propylbenzene	43	4.9	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
sec-Butylbenzene	ND	4.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Styrene	ND	5.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1,1-Trichloroethane	ND	3.1	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/11/2018 1:30:26 AM	W54032
Vinyl chloride	ND	2.2	20		µg/L	20	9/11/2018 1:30:26 AM	W54032
Xylenes, Total	990	13	30		µg/L	20	9/11/2018 1:30:26 AM	W54032
Surr: 1,2-Dichloroethane-d4	91.6	0	70-130		%Rec	20	9/11/2018 1:30:26 AM	W54032
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	20	9/11/2018 1:30:26 AM	W54032
Surr: Dibromofluoromethane	91.8	0	70-130		%Rec	20	9/11/2018 1:30:26 AM	W54032
Surr: Toluene-d8	100	0	70-130		%Rec	20	9/11/2018 1:30:26 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	22	0.19	1.0		mg/L	20	9/11/2018 1:30:26 AM	G54032
Surr: BFB	102	0	70-130		%Rec	20	9/11/2018 1:30:26 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.1	0.63	1.0		mg/L	1	9/7/2018 12:17:31 PM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 12:17:31 PM	40147
Surr: DNOP	134	0	76.7-135		%Rec	1	9/7/2018 12:17:31 PM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/10/2018 6:29:47 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 6:29:47 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 6:29:47 PM	40141
3+4-Methylphenol	10	5.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 6:29:47 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Naphthalene	5.2	5.0	10	J	µg/L	1	9/10/2018 6:29:47 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 6:29:47 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 6:29:47 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 6:29:47 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 6:29:47 PM	40141
Surr: 2-Fluorophenol	25.9	0	15-74.1		%Rec	1	9/10/2018 6:29:47 PM	40141
Surr: Phenol-d5	21.7	0	15-59.8		%Rec	1	9/10/2018 6:29:47 PM	40141
Surr: 2,4,6-Tribromophenol	44.5	0	22.1-112		%Rec	1	9/10/2018 6:29:47 PM	40141
Surr: Nitrobenzene-d5	43.4	0	33.2-94		%Rec	1	9/10/2018 6:29:47 PM	40141
Surr: 2-Fluorobiphenyl	40.5	0	34-90.9		%Rec	1	9/10/2018 6:29:47 PM	40141
Surr: 4-Terphenyl-d14	30.7	0	15-149		%Rec	1	9/10/2018 6:29:47 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.42	0.16	0.50	J	mg/L	5	9/18/2018 8:54:39 PM	R54253
Chloride	330	0.59	10		mg/L	20	8/31/2018 11:43:40 PM	A53878
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 11:31:15 PM	R53878
Bromide	2.0	0.13	0.50		mg/L	5	8/31/2018 11:31:15 PM	R53878
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/31/2018 11:31:15 PM	R53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 11:31:15 PM	R53878
Sulfate	5.6	1.0	2.5		mg/L	5	8/31/2018 11:31:15 PM	R53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.2	0.0049	0.010	*	mg/L	5	9/25/2018 9:15:17 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:13:21 PM	A54392
Calcium	180	0.39	5.0		mg/L	5	9/25/2018 9:15:17 PM	A54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:13:21 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:38:25 PM	B54309
Iron	17	0.33	0.40	*	mg/L	20	9/25/2018 9:17:10 PM	A54392
Magnesium	29	0.25	1.0		mg/L	1	9/20/2018 11:38:25 PM	B54309
Manganese	3.6	0.0020	0.010	*	mg/L	5	9/25/2018 9:15:17 PM	A54392
Potassium	21	0.11	1.0		mg/L	1	9/20/2018 11:38:25 PM	B54309
Silver	0.0025	0.0018	0.0050	J	mg/L	1	9/20/2018 11:38:25 PM	B54309
Sodium	200	0.82	5.0		mg/L	5	9/25/2018 9:15:17 PM	A54392
Zinc	0.017	0.0021	0.010		mg/L	1	9/25/2018 9:13:21 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.022	0.0021	0.0050	*	mg/L	5	9/7/2018 11:57:53 AM	B53991
Lead	ND	0.00087	0.0025		mg/L	5	9/7/2018 11:57:53 AM	B53991
Selenium	ND	0.0038	0.0050		mg/L	5	9/7/2018 11:57:53 AM	B53991
Uranium	0.0012	0.00048	0.0025	J	mg/L	5	9/7/2018 11:57:53 AM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018
Lab ID: 1808J13-013F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	4.2	0.0050	0.010	*	mg/L	5	9/14/2018 6:13:42 PM	40310
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:06:52 PM	40310
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:06:52 PM	40310
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:06:52 PM	40310
Iron	19	0.20	0.40	*	mg/L	20	9/14/2018 6:15:37 PM	40310
Manganese	3.8	0.0055	0.010	*	mg/L	5	9/14/2018 6:13:42 PM	40310
Silver	0.0015	0.0012	0.0050	J	mg/L	1	9/13/2018 9:06:52 PM	40310
Zinc	0.013	0.0033	0.010		mg/L	1	9/18/2018 4:55:10 PM	40395
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.023	0.00041	0.0010	*	mg/L	1	9/13/2018 6:52:40 PM	40310
Lead	0.0014	0.00023	0.00050		mg/L	1	9/13/2018 6:52:40 PM	40310
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 6:52:40 PM	40310
Uranium	0.0019	0.000068	0.00050		mg/L	1	9/13/2018 6:52:40 PM	40310
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/20/2018 11:19:19 AM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	9900	17	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Toluene	64	17	100	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
Ethylbenzene	770	22	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Methyl tert-butyl ether (MTBE)	96	32	100	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2,4-Trimethylbenzene	1400	25	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,3,5-Trimethylbenzene	430	23	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Naphthalene	290	29	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
1-Methylnaphthalene	50	34	400	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
2-Methylnaphthalene	57	24	400	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
Acetone	ND	79	1000		µg/L	100	9/11/2018 2:28:32 AM	W54032
Bromobenzene	ND	32	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Bromodichloromethane	ND	28	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Bromoform	ND	32	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Bromomethane	ND	26	300		µg/L	100	9/11/2018 2:28:32 AM	W54032
2-Butanone	ND	130	1000		µg/L	100	9/11/2018 2:28:32 AM	W54032
Carbon disulfide	ND	39	1000		µg/L	100	9/11/2018 2:28:32 AM	W54032
Carbon Tetrachloride	ND	13	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Chlorobenzene	ND	29	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Chloroethane	ND	16	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
Chloroform	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Chloromethane	ND	29	300		µg/L	100	9/11/2018 2:28:32 AM	W54032
2-Chlorotoluene	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
4-Chlorotoluene	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
cis-1,2-DCE	ND	38	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
Dibromochloromethane	ND	24	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Dibromomethane	ND	32	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2-Dichlorobenzene	ND	31	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,3-Dichlorobenzene	ND	31	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,4-Dichlorobenzene	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Dichlorodifluoromethane	ND	100	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1-Dichloroethane	ND	40	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1-Dichloroethene	ND	12	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2-Dichloropropane	ND	15	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,3-Dichloropropane	ND	27	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
2,2-Dichloropropane	ND	18	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1-Dichloropropene	ND	16	100		µg/L	100	9/11/2018 2:28:32 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	80	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
2-Hexanone	ND	91	1000		µg/L	100	9/11/2018 2:28:32 AM	W54032
Isopropylbenzene	ND	22	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
4-Isopropyltoluene	ND	24	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
4-Methyl-2-pentanone	50	45	1000	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
Methylene Chloride	ND	21	300		µg/L	100	9/11/2018 2:28:32 AM	W54032
n-Butylbenzene	ND	25	300		µg/L	100	9/11/2018 2:28:32 AM	W54032
n-Propylbenzene	63	24	100	J	µg/L	100	9/11/2018 2:28:32 AM	W54032
sec-Butylbenzene	ND	20	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Styrene	ND	25	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
tert-Butylbenzene	ND	22	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
trans-1,2-DCE	ND	18	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1,1-Trichloroethane	ND	15	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,1,2-Trichloroethane	ND	23	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Trichloroethene (TCE)	ND	26	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Trichlorofluoromethane	ND	17	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
1,2,3-Trichloropropane	ND	57	200		µg/L	100	9/11/2018 2:28:32 AM	W54032
Vinyl chloride	ND	11	100		µg/L	100	9/11/2018 2:28:32 AM	W54032
Xylenes, Total	9100	64	150		µg/L	100	9/11/2018 2:28:32 AM	W54032
Surr: 1,2-Dichloroethane-d4	95.0	0	70-130		%Rec	100	9/11/2018 2:28:32 AM	W54032
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	100	9/11/2018 2:28:32 AM	W54032
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	100	9/11/2018 2:28:32 AM	W54032
Surr: Toluene-d8	105	0	70-130		%Rec	100	9/11/2018 2:28:32 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	70	0.97	5.0		mg/L	100	9/11/2018 2:28:32 AM	G54032
Surr: BFB	99.4	0	70-130		%Rec	100	9/11/2018 2:28:32 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	11	0.63	1.0		mg/L	1	9/7/2018 5:00:56 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 5:00:56 AM	40147
Surr: DNOP	141	0	76.7-135	S	%Rec	1	9/7/2018 5:00:56 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzoic acid	ND	6.3	20		µg/L	1	9/10/2018 6:59:17 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4-Dimethylphenol	35	5.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 6:59:17 PM	40141
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Methylphenol	ND	6.3	10		µg/L	1	9/10/2018 6:59:17 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 6:59:17 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Naphthalene	16	5.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 6:59:17 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 6:59:17 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Phenol	ND	6.0	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 6:59:17 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 6:59:17 PM	40141
Surr: 2-Fluorophenol	25.9	0	15-74.1		%Rec	1	9/10/2018 6:59:17 PM	40141
Surr: Phenol-d5	29.7	0	15-59.8		%Rec	1	9/10/2018 6:59:17 PM	40141
Surr: 2,4,6-Tribromophenol	65.8	0	22.1-112		%Rec	1	9/10/2018 6:59:17 PM	40141
Surr: Nitrobenzene-d5	66.8	0	33.2-94		%Rec	1	9/10/2018 6:59:17 PM	40141
Surr: 2-Fluorobiphenyl	57.8	0	34-90.9		%Rec	1	9/10/2018 6:59:17 PM	40141
Surr: 4-Terphenyl-d14	47.9	0	15-149		%Rec	1	9/10/2018 6:59:17 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	3.3	0.16	0.50		mg/L	5	9/18/2018 9:07:32 PM	R54253
Chloride	560	9.1	25		mg/L	50	9/18/2018 9:20:23 PM	R54253
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	8/31/2018 11:56:05 PM	A53878
Bromide	1.9	0.13	0.50		mg/L	5	8/31/2018 11:56:05 PM	A53878
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	8/31/2018 11:56:05 PM	A53878
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	8/31/2018 11:56:05 PM	A53878
Sulfate	8.4	1.0	2.5		mg/L	5	8/31/2018 11:56:05 PM	A53878

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.0	0.0049	0.010	*	mg/L	5	9/25/2018 9:21:02 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:19:06 PM	A54392
Calcium	170	0.39	5.0		mg/L	5	9/25/2018 9:21:02 PM	A54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:19:06 PM	A54392
Copper	0.011	0.0032	0.0060		mg/L	1	9/20/2018 11:40:18 PM	B54309
Iron	5.3	0.16	0.20	*	mg/L	10	9/25/2018 9:31:00 PM	A54392
Magnesium	37	0.25	1.0		mg/L	1	9/20/2018 11:40:18 PM	B54309
Manganese	2.8	0.0020	0.010	*	mg/L	5	9/25/2018 9:21:02 PM	A54392
Potassium	17	0.11	1.0		mg/L	1	9/20/2018 11:40:18 PM	B54309
Silver	0.0036	0.0018	0.0050	J	mg/L	1	9/20/2018 11:40:18 PM	B54309
Sodium	440	0.82	5.0		mg/L	5	9/25/2018 9:21:02 PM	A54392
Zinc	0.014	0.0021	0.010		mg/L	1	9/25/2018 9:19:06 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.026	0.0021	0.0050	*	mg/L	5	9/7/2018 12:00:16 PM	B53991
Lead	0.0039	0.00087	0.0025		mg/L	5	9/7/2018 12:00:16 PM	B53991
Selenium	ND	0.0038	0.0050		mg/L	5	9/7/2018 12:00:16 PM	B53991
Uranium	0.0012	0.00048	0.0025	J	mg/L	5	9/7/2018 12:00:16 PM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:15:00 AM
Lab ID: 1808J13-014F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	4.0	0.0050	0.010	*	mg/L	5	9/18/2018 5:01:05 PM	40395
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:08:52 PM	40310
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:08:52 PM	40310
Copper	0.021	0.0041	0.0060		mg/L	1	9/14/2018 6:17:30 PM	40310
Iron	5.8	0.10	0.20	*	mg/L	10	9/14/2018 6:25:51 PM	40310
Manganese	3.0	0.0055	0.010	*	mg/L	5	9/18/2018 5:01:05 PM	40395
Silver	0.0041	0.0012	0.0050	J	mg/L	1	9/13/2018 9:08:52 PM	40310
Zinc	0.019	0.0033	0.010		mg/L	1	9/18/2018 4:59:05 PM	40395
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.028	0.00041	0.0010	*	mg/L	1	9/13/2018 7:04:11 PM	40310
Lead	0.0054	0.00023	0.00050		mg/L	1	9/13/2018 7:04:11 PM	40310
Selenium	ND	0.00098	0.0010		mg/L	1	9/13/2018 7:04:11 PM	40310
Uranium	0.0017	0.000068	0.00050		mg/L	1	9/13/2018 7:04:11 PM	40310
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/20/2018 12:57:43 PM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	17000	170	1000		µg/L	1E+	9/11/2018 2:57:50 AM	W54032
Toluene	130	17	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Ethylbenzene	1300	22	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Methyl tert-butyl ether (MTBE)	640	32	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2,4-Trimethylbenzene	580	25	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,3,5-Trimethylbenzene	70	23	100	J	µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2-Dichloroethane (EDC)	ND	40	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Naphthalene	150	29	200	J	µg/L	100	9/11/2018 3:27:28 AM	W54032
1-Methylnaphthalene	ND	34	400		µg/L	100	9/11/2018 3:27:28 AM	W54032
2-Methylnaphthalene	37	24	400	J	µg/L	100	9/11/2018 3:27:28 AM	W54032
Acetone	ND	79	1000		µg/L	100	9/11/2018 3:27:28 AM	W54032
Bromobenzene	ND	32	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Bromodichloromethane	ND	28	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Bromoform	ND	32	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Bromomethane	ND	26	300		µg/L	100	9/11/2018 3:27:28 AM	W54032
2-Butanone	ND	130	1000		µg/L	100	9/11/2018 3:27:28 AM	W54032
Carbon disulfide	ND	39	1000		µg/L	100	9/11/2018 3:27:28 AM	W54032
Carbon Tetrachloride	ND	13	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Chlorobenzene	ND	29	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Chloroethane	ND	16	200		µg/L	100	9/11/2018 3:27:28 AM	W54032
Chloroform	ND	40	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Chloromethane	ND	29	300		µg/L	100	9/11/2018 3:27:28 AM	W54032
2-Chlorotoluene	ND	40	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
4-Chlorotoluene	ND	40	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
cis-1,2-DCE	ND	38	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	9/11/2018 3:27:28 AM	W54032
Dibromochloromethane	ND	24	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Dibromomethane	ND	32	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2-Dichlorobenzene	ND	31	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,3-Dichlorobenzene	ND	31	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,4-Dichlorobenzene	ND	40	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Dichlorodifluoromethane	ND	100	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1-Dichloroethane	47	40	100	J	µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1-Dichloroethene	ND	12	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2-Dichloropropane	ND	15	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,3-Dichloropropane	ND	27	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
2,2-Dichloropropane	ND	18	200		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1-Dichloropropene	ND	16	100		µg/L	100	9/11/2018 3:27:28 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	80	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
2-Hexanone	ND	91	1000		µg/L	100	9/11/2018 3:27:28 AM	W54032
Isopropylbenzene	ND	22	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
4-Isopropyltoluene	ND	24	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
4-Methyl-2-pentanone	ND	45	1000		µg/L	100	9/11/2018 3:27:28 AM	W54032
Methylene Chloride	ND	21	300		µg/L	100	9/11/2018 3:27:28 AM	W54032
n-Butylbenzene	ND	25	300		µg/L	100	9/11/2018 3:27:28 AM	W54032
n-Propylbenzene	66	24	100	J	µg/L	100	9/11/2018 3:27:28 AM	W54032
sec-Butylbenzene	ND	20	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Styrene	ND	25	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
tert-Butylbenzene	ND	22	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	9/11/2018 3:27:28 AM	W54032
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
trans-1,2-DCE	ND	18	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1,1-Trichloroethane	ND	15	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,1,2-Trichloroethane	ND	23	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Trichloroethene (TCE)	ND	26	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Trichlorofluoromethane	ND	17	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
1,2,3-Trichloropropane	ND	57	200		µg/L	100	9/11/2018 3:27:28 AM	W54032
Vinyl chloride	ND	11	100		µg/L	100	9/11/2018 3:27:28 AM	W54032
Xylenes, Total	1400	64	150		µg/L	100	9/11/2018 3:27:28 AM	W54032
Surr: 1,2-Dichloroethane-d4	96.1	0	70-130		%Rec	100	9/11/2018 3:27:28 AM	W54032
Surr: 4-Bromofluorobenzene	98.6	0	70-130		%Rec	100	9/11/2018 3:27:28 AM	W54032
Surr: Dibromofluoromethane	92.2	0	70-130		%Rec	100	9/11/2018 3:27:28 AM	W54032
Surr: Toluene-d8	101	0	70-130		%Rec	100	9/11/2018 3:27:28 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	50	0.97	5.0		mg/L	100	9/11/2018 3:27:28 AM	G54032
Surr: BFB	97.6	0	70-130		%Rec	100	9/11/2018 3:27:28 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.3	0.63	1.0		mg/L	1	9/7/2018 5:22:51 AM	40147
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/7/2018 5:22:51 AM	40147
Surr: DNOP	139	0	76.7-135	S	%Rec	1	9/7/2018 5:22:51 AM	40147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Acenaphthylene	ND	6.2	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Aniline	ND	6.2	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Anthracene	ND	5.7	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Azobenzene	ND	6.7	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzoic acid	25	6.3	20		µg/L	1	9/10/2018 7:28:50 PM	40141
Benzyl alcohol	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Carbazole	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Chloroaniline	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Chlorophenol	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Chrysene	ND	6.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Dibenzofuran	ND	6.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Diethyl phthalate	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4-Dimethylphenol	43	5.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Fluoranthene	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Fluorene	ND	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Hexachloroethane	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Isophorone	ND	6.2	10		µg/L	1	9/10/2018 7:28:50 PM	40141
1-Methylnaphthalene	17	7.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Methylnaphthalene	11	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Methylphenol	15	6.3	10		µg/L	1	9/10/2018 7:28:50 PM	40141
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/10/2018 7:28:50 PM	40141
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Naphthalene	72	5.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Nitroaniline	ND	5.9	10		µg/L	1	9/10/2018 7:28:50 PM	40141
3-Nitroaniline	ND	6.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Nitroaniline	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Nitrobenzene	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2-Nitrophenol	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
4-Nitrophenol	ND	5.6	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Pentachlorophenol	ND	5.3	20		µg/L	1	9/10/2018 7:28:50 PM	40141
Phenanthrene	ND	6.0	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Phenol	330	12	20		µg/L	2	9/12/2018 7:20:00 PM	40141
Pyrene	ND	6.5	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Pyridine	ND	5.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/10/2018 7:28:50 PM	40141
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/10/2018 7:28:50 PM	40141
Surr: 2-Fluorophenol	20.0	0	15-74.1		%Rec	1	9/10/2018 7:28:50 PM	40141
Surr: Phenol-d5	38.3	0	15-59.8		%Rec	1	9/10/2018 7:28:50 PM	40141
Surr: 2,4,6-Tribromophenol	75.2	0	22.1-112		%Rec	1	9/10/2018 7:28:50 PM	40141
Surr: Nitrobenzene-d5	70.4	0	33.2-94		%Rec	1	9/10/2018 7:28:50 PM	40141
Surr: 2-Fluorobiphenyl	73.7	0	34-90.9		%Rec	1	9/10/2018 7:28:50 PM	40141
Surr: 4-Terphenyl-d14	46.9	0	15-149		%Rec	1	9/10/2018 7:28:50 PM	40141

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.5	0.16	0.50		mg/L	5	9/18/2018 9:33:15 PM	R54253
Chloride	650	9.1	25		mg/L	50	9/22/2018 10:34:23 PM	A54359
Bromide	2.3	0.13	0.50		mg/L	5	9/18/2018 9:33:15 PM	R54253
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/18/2018 9:33:15 PM	R54253
Sulfate	1.4	1.0	2.5	J	mg/L	5	9/18/2018 9:33:15 PM	R54253
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/18/2018 9:58:58 PM	R54253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.1	0.0049	0.010	*	mg/L	5	9/25/2018 9:34:58 PM	A54392
Cadmium	ND	0.0010	0.0020		mg/L	1	9/25/2018 9:33:03 PM	A54392
Calcium	85	0.078	1.0		mg/L	1	9/20/2018 11:42:12 PM	B54309
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 9:33:03 PM	A54392
Copper	ND	0.0032	0.0060		mg/L	1	9/20/2018 11:42:12 PM	B54309
Iron	1.8	0.082	0.10	*	mg/L	5	9/25/2018 9:34:58 PM	A54392
Magnesium	23	0.25	1.0		mg/L	1	9/20/2018 11:42:12 PM	B54309
Manganese	1.8	0.0020	0.010	*	mg/L	5	9/25/2018 9:34:58 PM	A54392
Potassium	2.0	0.11	1.0		mg/L	1	9/20/2018 11:42:12 PM	B54309
Silver	ND	0.0018	0.0050		mg/L	1	9/20/2018 11:42:12 PM	B54309
Sodium	580	1.6	10		mg/L	10	9/25/2018 9:36:59 PM	A54392
Zinc	0.0074	0.0021	0.010	J	mg/L	1	9/25/2018 9:33:03 PM	A54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.018	0.00042	0.0010	*	mg/L	1	9/7/2018 12:02:38 PM	B53991
Lead	ND	0.00017	0.00050		mg/L	1	9/7/2018 12:02:38 PM	B53991
Selenium	ND	0.00076	0.0010		mg/L	1	9/7/2018 12:02:38 PM	B53991
Uranium	0.0062	0.000096	0.00050		mg/L	1	9/7/2018 12:02:38 PM	B53991

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-16
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 8/31/2018 11:45:00 AM
Lab ID: 1808J13-015F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	1.9	0.0050	0.010		mg/L	5	9/14/2018 6:29:39 PM	40310
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:10:52 PM	40310
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:10:52 PM	40310
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:10:52 PM	40310
Iron	3.6	0.051	0.10	*	mg/L	5	9/14/2018 6:29:39 PM	40310
Manganese	1.7	0.0055	0.010	*	mg/L	5	9/14/2018 6:29:39 PM	40310
Silver	0.0016	0.0012	0.0050	J	mg/L	1	9/13/2018 9:10:52 PM	40310
Zinc	0.014	0.0033	0.010		mg/L	1	9/18/2018 5:03:03 PM	40395
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.019	0.0021	0.0050	*	mg/L	5	9/14/2018 7:13:13 PM	40310
Lead	0.0019	0.0011	0.0025	J	mg/L	5	9/14/2018 7:13:13 PM	40310
Selenium	ND	0.0049	0.0050		mg/L	5	9/14/2018 7:13:13 PM	40310
Uranium	0.0074	0.00034	0.0025		mg/L	5	9/18/2018 1:53:27 PM	40310
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/20/2018 12:59:57 PM	40446

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808J13-016A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Toluene	ND	0.17	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Naphthalene	ND	0.29	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Acetone	ND	0.79	10		µg/L	1	9/11/2018 5:52:58 AM	W54032
Bromobenzene	ND	0.32	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Bromoform	ND	0.32	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Bromomethane	ND	0.26	3.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
2-Butanone	ND	1.3	10		µg/L	1	9/11/2018 5:52:58 AM	W54032
Carbon disulfide	ND	0.39	10		µg/L	1	9/11/2018 5:52:58 AM	W54032
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Chloroethane	ND	0.16	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Chloroform	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Chloromethane	ND	0.29	3.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Dibromomethane	ND	0.32	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1808J13-016A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
2-Hexanone	ND	0.91	10		µg/L	1	9/11/2018 5:52:58 AM	W54032
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/11/2018 5:52:58 AM	W54032
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Styrene	ND	0.25	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/11/2018 5:52:58 AM	W54032
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/11/2018 5:52:58 AM	W54032
Surr: 1,2-Dichloroethane-d4	94.8	0	70-130		%Rec	1	9/11/2018 5:52:58 AM	W54032
Surr: 4-Bromofluorobenzene	97.8	0	70-130		%Rec	1	9/11/2018 5:52:58 AM	W54032
Surr: Dibromofluoromethane	93.4	0	70-130		%Rec	1	9/11/2018 5:52:58 AM	W54032
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	9/11/2018 5:52:58 AM	W54032
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/11/2018 5:52:58 AM	G54032
Surr: BFB	94.2	0	70-130		%Rec	1	9/11/2018 5:52:58 AM	G54032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1890		250	25	09/06/2018 12:48	WG1061721

Method Blank (MB)

(MB) R3339677-1 09/06/18 12:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1022926-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022926-01 09/06/18 12:50 • (DUP) R3339677-4 09/06/18 12:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	13.7	13.9	1	1.17		20

L1023167-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1023167-01 09/06/18 12:54 • (DUP) R3339677-7 09/06/18 12:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	12.4	12.2	1	1.49		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3339677-2 09/06/18 12:47 • (LCSD) R3339677-3 09/06/18 12:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	221	219	91.3	90.5	90.0-110			0.709	20

L1022933-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022933-02 09/06/18 12:51 • (MS) R3339677-5 09/06/18 12:52 • (MSD) R3339677-6 09/06/18 12:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	17.0	430	423	104	103	1	80.0-120			1.53	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803313** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0015	0.0020	0.002000	0	72.5	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	81.5	50	150			J
Calcium	0.50	1.0	0.5000	0	99.4	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Iron	0.021	0.020	0.02000	0	106	50	150			
Magnesium	0.47	1.0	0.5000	0	94.9	50	150			J
Manganese	0.0018	0.0020	0.002000	0	92.0	50	150			J
Potassium	0.56	1.0	0.5000	0	112	50	150			J
Silver	0.0055	0.0050	0.005000	0	110	50	150			
Sodium	0.44	1.0	0.5000	0	87.0	50	150			J
Zinc	0.0052	0.010	0.005000	0	103	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803314** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.9	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.2	85	115			
Calcium	47	1.0	50.00	0	94.4	85	115			
Chromium	0.47	0.0060	0.5000	0	93.6	85	115			
Iron	0.47	0.020	0.5000	0	94.6	85	115			
Magnesium	47	1.0	50.00	0	95.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A54392**			RunNo: **54392**					
Prep Date:		Analysis Date: **9/25/2018**			SeqNo: **1803314**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.46	0.0020	0.5000	0	92.5	85	115			
Potassium	47	1.0	50.00	0	94.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	47	1.0	50.00	0	93.3	85	115			
Zinc	0.46	0.010	0.5000	0	92.7	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A54547**			RunNo: **54547**					
Prep Date:		Analysis Date: **10/1/2018**			SeqNo: **1808421**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Manganese	ND	0.0020								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A54547**			RunNo: **54547**					
Prep Date:		Analysis Date: **10/1/2018**			SeqNo: **1808422**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	92.0	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0022	0.0020	0.002000	0	112	50	150			

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A54547**			RunNo: **54547**					
Prep Date:		Analysis Date: **10/1/2018**			SeqNo: **1808423**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.6	85	115			
Calcium	49	1.0	50.00	0	98.7	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810775**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810776**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.019	0.020	0.02000	0	93.5	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810780**		Units: **mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.49	0.020	0.5000	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40309**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40309**	RunNo: **54126**
Prep Date: **9/12/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	0.0044	0.010								J

Sample ID **LLLCS-40309**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40309**	RunNo: **54126**
Prep Date: **9/12/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	98.5	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	90.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Copper	0.0045	0.0060	0.006000	0	74.5	50	150			J
Iron	0.020	0.020	0.02000	0	102	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0058	0.0050	0.005000	0	116	50	150			
Zinc	0.0074	0.010	0.005000	0	147	50	150			J

Sample ID **LCS-40309**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40309**	RunNo: **54126**
Prep Date: **9/12/2018**	Analysis Date: **9/13/2018**	SeqNo: **1789353** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	103	85	115			
Chromium	0.48	0.0060	0.5000	0	96.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Manganese	0.47	0.0020	0.5000	0	94.6	85	115			
Silver	0.11	0.0050	0.1000	0	110	85	115			
Zinc	0.47	0.010	0.5000	0	94.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40310**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40310**	RunNo:	**54126**
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789737** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LCSLL-40310**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40310**	RunNo:	**54126**
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789738** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Cadmium	0.0012	0.0020	0.002000	0	62.0	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0056	0.0050	0.005000	0	111	50	150			

Sample ID	**LCS-40310**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40310**	RunNo:	**54126**
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789739** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			

Sample ID	**1808J13-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**FB09**	Batch ID:	**40309**	RunNo:	**54126**
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	70	130			
Cadmium	0.50	0.0020	0.5000	0	101	70	130			
Chromium	0.46	0.0060	0.5000	0	92.4	70	130			
Copper	0.49	0.0060	0.5000	0	98.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808J13-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB09**	Batch ID:	**40309**		RunNo:	**54126**				
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789874**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	101	70	130			
Manganese	0.47	0.0020	0.5000	0	95.0	70	130			
Silver	0.11	0.0050	0.1000	0	106	70	130			
Zinc	0.47	0.010	0.5000	0.003730	93.1	70	130			

Sample ID	**1808J13-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB09**	Batch ID:	**40309**		RunNo:	**54126**				
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789875**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	70	130	0.734	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	0.915	20	
Chromium	0.47	0.0060	0.5000	0	93.5	70	130	1.18	20	
Copper	0.49	0.0060	0.5000	0	98.5	70	130	0.0914	20	
Iron	0.51	0.020	0.5000	0	101	70	130	0.690	20	
Manganese	0.48	0.0020	0.5000	0	95.5	70	130	0.567	20	
Silver	0.11	0.0050	0.1000	0	107	70	130	1.21	20	
Zinc	0.47	0.010	0.5000	0.003730	94.1	70	130	0.994	20	

Sample ID	**1808J13-012FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MKTF-21**	Batch ID:	**40310**		RunNo:	**54126**				
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789893**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.3	70	130			
Chromium	0.44	0.0060	0.5000	0	87.5	70	130			
Copper	0.51	0.0060	0.5000	0	102	70	130			
Silver	0.11	0.0050	0.1000	0.002450	109	70	130			

Sample ID	**1808J13-012FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MKTF-21**	Batch ID:	**40310**		RunNo:	**54126**				
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789894**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.0	70	130	1.36	20	
Chromium	0.43	0.0060	0.5000	0	86.1	70	130	1.64	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	0.555	20	
Silver	0.11	0.0050	0.1000	0.002450	106	70	130	2.40	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**
12-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40310**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40310**	RunNo: **54165**
Prep Date: **9/12/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790805** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID **LCSLL-40310**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40310**	RunNo: **54165**
Prep Date: **9/12/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790806** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0068	0.0060	0.006000	0	113	50	150			

Sample ID **LCS-40310**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40310**	RunNo: **54165**
Prep Date: **9/12/2018**	Analysis Date: **9/14/2018**	SeqNo: **1790807** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.47	0.0060	0.5000	0	94.3	85	115			

Sample ID **MB-40395**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40395**	RunNo: **54217**
Prep Date: **9/17/2018**	Analysis Date: **9/18/2018**	SeqNo: **1793809** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LLLCS-40395**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40395**	RunNo: **54217**
Prep Date: **9/17/2018**	Analysis Date: **9/18/2018**	SeqNo: **1793810** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	77.5	50	150			J
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Zinc	0.0067	0.010	0.005000	0	134	50	150			J

Sample ID **LCS-40395**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40395**	RunNo: **54217**
Prep Date: **9/17/2018**	Analysis Date: **9/18/2018**	SeqNo: **1793811** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-40395**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**40395**		RunNo:	**54217**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**		SeqNo:	**1793811**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Sample ID	**1808J13-015FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MKTF-16**	Batch ID:	**40395**		RunNo:	**54217**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**		SeqNo:	**1794110**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0.01431	97.4	70	130			

Sample ID	**1808J13-015FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MKTF-16**	Batch ID:	**40395**		RunNo:	**54217**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**		SeqNo:	**1794154**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.51	0.010	0.5000	0.01431	98.4	70	130	0.947	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B53991**	RunNo:	**53991**					
Prep Date:		Analysis Date:	**9/7/2018**	SeqNo:	**1783209**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B53991**	RunNo:	**53991**					
Prep Date:		Analysis Date:	**9/7/2018**	SeqNo:	**1783210**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.8	50	150			J
Lead	0.00049	0.00050	0.0005000	0	97.6	50	150			J
Selenium	0.0010	0.0010	0.001000	0	100	50	150			
Uranium	0.00048	0.00050	0.0005000	0	97.0	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B53991**	RunNo:	**53991**					
Prep Date:		Analysis Date:	**9/7/2018**	SeqNo:	**1783211**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.9	85	115			
Lead	0.012	0.00050	0.01250	0	98.3	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.012	0.00050	0.01250	0	97.0	85	115			

Sample ID	**1808J13-001ELLMS**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**FB09**	Batch ID:	**B53991**	RunNo:	**53991**					
Prep Date:		Analysis Date:	**9/7/2018**	SeqNo:	**1783216**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.3	70	130			
Lead	0.012	0.00050	0.01250	0	98.8	70	130			
Selenium	0.025	0.0010	0.02500	0	100	70	130			
Uranium	0.012	0.00050	0.01250	0	96.9	70	130			

Sample ID	**1808J13-001ELLMS**	SampType:	**MSD**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**FB09**	Batch ID:	**B53991**	RunNo:	**53991**					
Prep Date:		Analysis Date:	**9/7/2018**	SeqNo:	**1783217**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1808J13-001ELLMS**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB09**	Batch ID:	**B53991**		RunNo:	**53991**				
Prep Date:		Analysis Date:	**9/7/2018**		SeqNo:	**1783217**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	70	130	0.0276	20	
Lead	0.012	0.00050	0.01250	0	98.8	70	130	0.00680	20	
Selenium	0.025	0.0010	0.02500	0	99.7	70	130	0.403	20	
Uranium	0.012	0.00050	0.01250	0	96.6	70	130	0.314	20	

Sample ID	**1808J13-002ELLMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB09**	Batch ID:	**B53991**		RunNo:	**53991**				
Prep Date:		Analysis Date:	**9/7/2018**		SeqNo:	**1783219**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.4	70	130			
Lead	0.012	0.00050	0.01250	0	97.5	70	130			
Selenium	0.025	0.0010	0.02500	0	99.0	70	130			
Uranium	0.012	0.00050	0.01250	0	94.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40309**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40309**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790592**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40309**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40309**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790594**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	95.9	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.4	50	150			J
Selenium	0.00095	0.0010	0.001000	0	95.1	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	88.2	50	150			J

Sample ID	**MSLCS-40309**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40309**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790596**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.0	85	115			
Lead	0.012	0.00050	0.01250	0	95.9	85	115			
Selenium	0.023	0.0010	0.02500	0	93.8	85	115			
Uranium	0.011	0.00050	0.01250	0	89.2	85	115			

Sample ID	**MB-40310**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790648**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40310**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790649**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLLLCS-40310**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790649**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Selenium	ND	0.0010	0.001000	0	0	50	150			S
Uranium	0.00049	0.00050	0.0005000	0	98.0	50	150			J

Sample ID	**MSLCS-40310**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790650**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.2	85	115			
Lead	0.012	0.00050	0.01250	0	96.3	85	115			
Selenium	0.024	0.0010	0.02500	0	97.5	85	115			
Uranium	0.012	0.00050	0.01250	0	96.1	85	115			

Sample ID	**1808J13-013FMSLL**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**DUP10**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790652**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.047	0.0010	0.02500	0.02320	97.0	70	130			
Lead	0.013	0.00050	0.01250	0.001443	90.4	70	130			
Selenium	0.025	0.0010	0.02500	0	101	70	130			
Uranium	0.014	0.00050	0.01250	0.001873	96.9	70	130			

Sample ID	**1808J13-013FMSDL**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**DUP10**	Batch ID:	**40310**	RunNo:	**54158**					
Prep Date:	**9/12/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1790655**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.048	0.0010	0.02500	0.02320	97.6	70	130	0.333	20	
Lead	0.013	0.00050	0.01250	0.001443	90.0	70	130	0.400	20	
Selenium	0.025	0.0010	0.02500	0	101	70	130	0.327	20	
Uranium	0.014	0.00050	0.01250	0.001873	97.1	70	130	0.189	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40446**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40446**	RunNo:	**54290**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796362**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40446**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40446**	RunNo:	**54290**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796363**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**
12-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778097** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778098** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.7	90	110			
Chloride	4.8	0.50	5.000	0	95.1	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.3	90	110			
Bromide	2.4	0.10	2.500	0	95.1	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.7	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.5	90	110			
Sulfate	9.3	0.50	10.00	0	92.7	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778138** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	111	90	110			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.8	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.6	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID **1808J13-011DMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **EB10**	Batch ID: **A53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.3	77.5	116			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	98.7	82.4	108			
Bromide	2.5	0.10	2.500	0	99.6	80.2	111			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0.05299	103	79.1	116			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	80.7	113			
Sulfate	10	0.50	10.00	0.8993	95.4	74.9	123			

Sample ID **1808J13-011DMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **EB10**	Batch ID: **A53878**	RunNo: **53878**
Prep Date:	Analysis Date: **8/31/2018**	SeqNo: **1778158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.2	77.5	116	2.17	20	
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.2	82.4	108	2.57	20	
Bromide	2.4	0.10	2.500	0	96.6	80.2	111	3.00	20	
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0.05299	100	79.1	116	2.30	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.8	80.7	113	2.34	20	
Sulfate	10	0.50	10.00	0.8993	93.2	74.9	123	2.10	20	

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54253**	RunNo: **54253**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794966** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54253**	RunNo: **54253**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794966** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54253**	RunNo: **54253**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794967** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.1	90	110			
Chloride	4.7	0.50	5.000	0	93.1	90	110			
Bromide	2.4	0.10	2.500	0	95.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.2	0.50	10.00	0	92.3	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A54359**	RunNo: **54359**
Prep Date:	Analysis Date: **9/22/2018**	SeqNo: **1799617** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54359**	RunNo: **54359**
Prep Date:	Analysis Date: **9/22/2018**	SeqNo: **1799618** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40237**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40237**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785819**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40237**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40237**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785821**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.090	0.010	0.1000	0	90.1	70	130			

Sample ID	**1808J13-005CMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-33**	Batch ID:	**40237**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785823**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.076	0.0094	0.09383	0	81.4	55	125			

Sample ID	**1808J13-005CMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**MKTF-33**	Batch ID:	**40237**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785825**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.085	0.0093	0.09309	0	91.7	55	125	11.1	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-40147**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40147**	RunNo: **53915**
Prep Date: **9/5/2018**	Analysis Date: **9/6/2018**	SeqNo: **1781660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.3		1.000		126	76.7	135			

Sample ID **LCS-40147**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40147**	RunNo: **53915**
Prep Date: **9/5/2018**	Analysis Date: **9/6/2018**	SeqNo: **1781661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	70	130			
Surr: DNOP	0.59		0.5000		117	76.7	135			

Sample ID **1808J13-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB09**	Batch ID: **40147**	RunNo: **53970**
Prep Date: **9/5/2018**	Analysis Date: **9/6/2018**	SeqNo: **1782341** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0.7110	101	82.8	143			
Surr: DNOP	0.49		0.5000		97.7	76.7	135			

Sample ID **1808J13-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB09**	Batch ID: **40147**	RunNo: **53970**
Prep Date: **9/5/2018**	Analysis Date: **9/7/2018**	SeqNo: **1782342** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0.7110	101	82.8	143	0.169	20	
Surr: DNOP	0.49		0.5000		98.7	76.7	135	0	0	

Sample ID **LCS-40235**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787068** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.46		0.5000		92.8	76.7	135			

Sample ID **MB-40235**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787069** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40235**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**40235**	RunNo:	**54034**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1787069**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1.0		1.000		102	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54008**	RunNo: **54008**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.24	4.0								J
Acetone	2.7	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54008**	RunNo: **54008**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784055** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	12		10.00		117	70	130			

Sample ID **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W54008**	RunNo: **54008**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.8	70	130			
Toluene	20	1.0	20.00	0	99.6	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W54008**	RunNo: **54008**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	92.4	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785731** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.42	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785731** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785731** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		99.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785732** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.3	70	130			
Toluene	19	1.0	20.00	0	96.4	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.3	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54084**	RunNo: **54084**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1787214** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.0	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W54084**	RunNo: **54084**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1787217** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		99.7	70	130			
Surr: Toluene-d8	9.5		10.00		95.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**
12-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40141**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40141**	RunNo: **54030**
Prep Date: **9/5/2018**	Analysis Date: **9/10/2018**	SeqNo: **1784957** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	68.8	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	81.6	57	115			
2-Chlorophenol	140	10	200.0	0	68.4	43.4	112			
1,4-Dichlorobenzene	62	10	100.0	0	61.8	38	95.2			
2,4-Dinitrotoluene	62	10	100.0	0	61.9	55.1	96.7			
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.1	55	112			
4-Nitrophenol	120	10	200.0	0	60.6	16.6	93			
Pentachlorophenol	130	20	200.0	0	64.1	43.2	104			
Phenol	110	10	200.0	0	55.7	21.3	85.7			
Pyrene	69	10	100.0	0	69.4	64.9	105			
1,2,4-Trichlorobenzene	75	10	100.0	0	75.0	42.6	107			
Surr: 2-Fluorophenol	120		200.0		58.5	15	74.1			
Surr: Phenol-d5	110		200.0		56.9	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.6	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		66.8	33.2	94			
Surr: 2-Fluorobiphenyl	64		100.0		64.0	34	90.9			
Surr: 4-Terphenyl-d14	67		100.0		67.0	15	149			

Sample ID **mb-40141**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40141**	RunNo: **54030**
Prep Date: **9/5/2018**	Analysis Date: **9/10/2018**	SeqNo: **1784958** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	9.2	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40141**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40141**	RunNo: **54030**
Prep Date: **9/5/2018**	Analysis Date: **9/10/2018**	SeqNo: **1784958** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**
12-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40141** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **40141** RunNo: **54030**
Prep Date: **9/5/2018** Analysis Date: **9/10/2018** SeqNo: **1784958** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.7	15	74.1			
Surr: Phenol-d5	120		200.0		60.2	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		69.8	22.1	112			
Surr: Nitrobenzene-d5	70		100.0		70.4	33.2	94			
Surr: 2-Fluorobiphenyl	69		100.0		69.0	34	90.9			
Surr: 4-Terphenyl-d14	86		100.0		85.7	15	149			

Sample ID **1808j13-005dms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-33** Batch ID: **40141** RunNo: **54030**
Prep Date: **9/5/2018** Analysis Date: **9/10/2018** SeqNo: **1785763** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	57	10	100.0	0	56.6	15	123			
4-Chloro-3-methylphenol	110	10	200.0	0	56.8	26.6	118			
2-Chlorophenol	97	10	200.0	0	48.4	15	120			
1,4-Dichlorobenzene	47	10	100.0	0	46.8	19	108			
2,4-Dinitrotoluene	52	10	100.0	0	52.4	27.8	103			
N-Nitrosodi-n-propylamine	60	10	100.0	0	60.3	32.3	126			
4-Nitrophenol	72	10	200.0	0	35.8	15	72.1			
Pentachlorophenol	120	20	200.0	0	58.0	15	114			
Phenol	51	10	200.0	0	25.4	15	67.5			
Pyrene	60	10	100.0	0	59.6	31.2	112			
1,2,4-Trichlorobenzene	51	10	100.0	0	51.0	22.1	123			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1808j13-005dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-33**	Batch ID: **40141**	RunNo: **54030**
Prep Date: **9/5/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785763** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	61		200.0		30.5	15	74.1			
Surr: Phenol-d5	49		200.0		24.5	15	59.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.1	22.1	112			
Surr: Nitrobenzene-d5	50		100.0		49.9	33.2	94			
Surr: 2-Fluorobiphenyl	52		100.0		52.4	34	90.9			
Surr: 4-Terphenyl-d14	59		100.0		59.2	15	149			

Sample ID **1808j13-005dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-33**	Batch ID: **40141**	RunNo: **54030**
Prep Date: **9/5/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785764** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	59.7	15	123	5.30	30.5	
4-Chloro-3-methylphenol	130	10	200.0	0	64.3	26.6	118	12.3	50	
2-Chlorophenol	110	10	200.0	0	52.8	15	120	8.65	36.3	
1,4-Dichlorobenzene	48	10	100.0	0	48.0	19	108	2.49	42.1	
2,4-Dinitrotoluene	55	10	100.0	0	55.5	27.8	103	5.79	28.5	
N-Nitrosodi-n-propylamine	59	10	100.0	0	58.5	32.3	126	3.06	25.4	
4-Nitrophenol	46	10	200.0	0	22.8	15	72.1	44.3	50	
Pentachlorophenol	130	20	200.0	0	64.2	15	114	10.1	50	
Phenol	52	10	200.0	0	26.2	15	67.5	2.94	46.1	
Pyrene	72	10	100.0	0	71.8	31.2	112	18.7	34.3	
1,2,4-Trichlorobenzene	53	10	100.0	0	53.1	22.1	123	4.00	43.6	
Surr: 2-Fluorophenol	66		200.0		32.8	15	74.1	0	0	
Surr: Phenol-d5	53		200.0		26.7	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	120		200.0		61.7	22.1	112	0	0	
Surr: Nitrobenzene-d5	53		100.0		52.7	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	56		100.0		56.1	34	90.9	0	0	
Surr: 4-Terphenyl-d14	67		100.0		67.4	15	149	0	0	

Sample ID **lcs-40294**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797042** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	140		200.0		69.0	15	74.1			
Surr: Phenol-d5	130		200.0		67.0	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.0	22.1	112			
Surr: Nitrobenzene-d5	85		100.0		85.1	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		75.8	34	90.9			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40294**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797042** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	91		100.0		90.6	15	149			

Sample ID **mb-40294**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797043** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
Naphthalene	ND	10								
Surr: 2-Fluorophenol	120		200.0		58.8	15	74.1			
Surr: Phenol-d5	110		200.0		52.6	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	22.1	112			
Surr: Nitrobenzene-d5	72		100.0		72.2	33.2	94			
Surr: 2-Fluorobiphenyl	73		100.0		73.5	34	90.9			
Surr: 4-Terphenyl-d14	91		100.0		90.7	15	149			

Sample ID **LCSD-40294**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40294**	RunNo: **54318**
Prep Date: **9/12/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798878** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		51.8	15	74.1	0	0	
Surr: Phenol-d5	93		200.0		46.4	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		76.7	22.1	112	0	0	
Surr: Nitrobenzene-d5	71		100.0		71.4	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		72.9	34	90.9	0	0	
Surr: 4-Terphenyl-d14	100		100.0		101	15	149	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**
12-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40097**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**40097**	RunNo:	**53954**					
Prep Date:	**8/31/2018**	Analysis Date:	**9/5/2018**	SeqNo:	**1781027**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**MB--40097**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**40097**	RunNo:	**53954**					
Prep Date:	**8/31/2018**	Analysis Date:	**9/5/2018**	SeqNo:	**1781028**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-40097**	SampType:	**LCS**	TestCode:	**SM5210B: BOD**					
Client ID:	**LCSW**	Batch ID:	**40097**	RunNo:	**53954**					
Prep Date:	**8/31/2018**	Analysis Date:	**9/5/2018**	SeqNo:	**1781029**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	130	2.0	198.0	0	66.1	84.6	115.4			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785785** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.012	0.050								J
Surr: BFB	9.4		10.00		94.5	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54032**	RunNo: **54032**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1785786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.8	70	130			
Surr: BFB	9.8		10.00		97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1808J13**

12-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40157**	SampType:	**MBLK**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**40157**	RunNo:	**53989**					
Prep Date:	**9/5/2018**	Analysis Date:	**9/7/2018**	SeqNo:	**1783108**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	**LCS-40157**	SampType:	**LCS**	TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**40157**	RunNo:	**53989**					
Prep Date:	**9/5/2018**	Analysis Date:	**9/7/2018**	SeqNo:	**1783109**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1030	20.0	1000	0	103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1808J13 | RcptNo: 1

Received By: Andy Freeman 8/31/2018 2:30:00 PM

Completed By: Erin Melendrez 9/4/2018 8:30:53 AM

Reviewed By: ENM 9/4/18

LB: JAB 09/04/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 4 5 (<2 or >12 unless noted)

Adjusted? No

Checked by: JAB 09/04/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: EB-09 Poured off from Amber for 8260/6200 pw TP 09/04/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			
2	0.5	Good	Yes			
3	0.5	Good	Yes			
4	5.7	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1808J13 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	0.3	Good	Yes			
6	1.7	Good	Yes			
7	0.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	0750	H_2O	FB09	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	0805	H_2O	EB 09	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	0835	H_2O	MKTF-44	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430	[signature]	[signature]	8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	0910	H_2O	MKTF-43	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	1010	H_2O	MKTF-33	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -2	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	1100	H_2O	MKTF-22	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/30/18	1230	H_2O	MKTF-13	40ml VOA-5	HCl	-007			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
8/30/18	—	H_2O	DUP09	40ml VOA-5	HCl	-008			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/30/18	—	H_2O	DUP09	40 ML VOA 3	$Na_2S_2O_3$						X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	BOD	TDS	COD	Air Bubbles (Y or N)
8/31/18	0820	H_2O	STP-1 to EP-2	40ml VOA-5	HCl	-009			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				
				1 Liter Plastic-1	Neat														X			
				500 ml Plastic-1	Neat															X		
				500 ml Plastic-1	H_2SO_4																X	

Date	Time	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	0925	H_2O	FB10	40ml VOA-5	HCl	-010			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	0945	H_2O	EB10	40ml VOA-5	HCl	-011			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler1: 4.4 Cooler 2: 0.5 Cooler3: 0.5 Cooler4: 5.7 Cooler5: 0.3 Cooler6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	1020	H_2O	MKTF-21	40ml VOA-5	HCl	-012			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	—	H_2O	DUP10	40ml VOA-5	HCl	-013			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5.7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	1115	H_2O	MKTF-20	40ml VOA-5	HCl	-014			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1:4.4 Cooler 2:0.5 Cooler 3:0.5 Cooler 4:5.7 Cooler 5:0.3 Cooler 6:1.7 Cooler 7:0.1

ENM 8/31/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1808J13	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
8/31/18	1145	H_2O	MKTF-16	40ml VOA-5	HCl	-015			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
8/31/18	—	H_2O	TRIP BLANK	40ML VOA-3	HCl											X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
8/31/18	1430			8/31/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 4.4 Cooler 2: 0.5 Cooler 3: 0.5 Cooler 4: 5-7 Cooler 5: 0.3 Cooler 6: 1.7 Cooler 7: 0.1

ENM 8/31/18

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	1890		250	25	09/06/2018 12:48	WG1161722

Method Blank (MB)

(MB) R3339677-1 09/06/18 12:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1022926-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1022926-01 09/06/18 12:50 • (DUP) R3339677-4 09/06/18 12:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	13.7	13.9	1	1.17		20

L1023167-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1023167-01 09/06/18 12:54 • (DUP) R3339677-7 09/06/18 12:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	12.4	12.2	1	1.49		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3339677-2 09/06/18 12:47 • (LCSD) R3339677-3 09/06/18 12:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	221	219	91.3	90.6	90.0-110			0.709	20

L1022933-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1022933-02 09/06/18 12:51 • (MS) R3339677-5 09/06/18 12:52 • (MSD) R3339677-6 09/06/18 12:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	12.0	430	423	104	103	1	80.0-120			1.53	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 15, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: Annual 3rd Quarter GW Sampling 2018 OrderNo.: 1809A73

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/19/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1809A73**
Date: **10/15/2018**

CLIENT: Andeavor Gallup
Project: Annual 3rd Quarter GW Sampling 2018

Analytical Notes Regarding EPA Mehtod 8270:
All 8270 samples in this report were scanned for Quinoline by the mass spec and were not detected.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 9:58:25 PM	G54282
Surr: BFB	95.6	0	69.3-150		%Rec	1	9/20/2018 9:58:25 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Toluene	0.43	0.17	1.0	J	µg/L	1	9/24/2018 3:20:42 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Acetone	3.1	0.79	10	J	µg/L	1	9/24/2018 3:20:42 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 3:20:42 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 3:20:42 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 3:20:42 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 3:20:42 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 3:20:42 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 3:20:42 PM	A54375
1,4-Dioxane	ND	4.1	10		µg/L	1	9/24/2018 3:20:42 PM	A54375
Surr: 1,2-Dichloroethane-d4	87.9	0	70-130		%Rec	1	9/24/2018 3:20:42 PM	A54375
Surr: 4-Bromofluorobenzene	98.7	0	70-130		%Rec	1	9/24/2018 3:20:42 PM	A54375
Surr: Dibromofluoromethane	85.7	0	70-130		%Rec	1	9/24/2018 3:20:42 PM	A54375
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	9/24/2018 3:20:42 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 10:43:16 AM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 10:43:16 AM	40496
Surr: DNOP	101	0	76.7-135		%Rec	1	9/21/2018 10:43:16 AM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Benzoic acid	6.8	6.3	20	J	µg/L	1	9/24/2018 2:24:08 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 2:24:08 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 2:24:08 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 2:24:08 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 2:24:08 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 2:24:08 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 2:24:08 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 2:24:08 PM	40466
Surr: 2-Fluorophenol	39.4	0	15-74.1		%Rec	1	9/24/2018 2:24:08 PM	40466
Surr: Phenol-d5	32.4	0	15-59.8		%Rec	1	9/24/2018 2:24:08 PM	40466
Surr: 2,4,6-Tribromophenol	56.4	0	22.1-112		%Rec	1	9/24/2018 2:24:08 PM	40466
Surr: Nitrobenzene-d5	58.0	0	33.2-94		%Rec	1	9/24/2018 2:24:08 PM	40466
Surr: 2-Fluorobiphenyl	55.8	0	34-90.9		%Rec	1	9/24/2018 2:24:08 PM	40466
Surr: 4-Terphenyl-d14	78.0	0	15-149		%Rec	1	9/24/2018 2:24:08 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.031	0.10		mg/L	1	9/19/2018 10:20:14 AM	R54277
Chloride	ND	0.18	0.50		mg/L	1	9/19/2018 10:20:14 AM	R54277
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	9/19/2018 10:20:14 AM	R54277
Bromide	ND	0.027	0.10		mg/L	1	9/19/2018 10:20:14 AM	R54277
Nitrogen, Nitrate (As N)	ND	0.0066	0.10		mg/L	1	9/19/2018 10:20:14 AM	R54277
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	9/19/2018 10:20:14 AM	R54277
Sulfate	ND	0.21	0.50		mg/L	1	9/19/2018 10:20:14 AM	R54277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/9/2018 3:52:20 PM	A54767
Beryllium	ND	0.00029	0.0020		mg/L	1	10/9/2018 3:52:20 PM	A54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 3:52:20 PM	A54767
Calcium	ND	0.078	1.0		mg/L	1	10/9/2018 3:52:20 PM	A54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 3:52:20 PM	A54767
Copper	ND	0.0032	0.0060		mg/L	1	10/9/2018 3:52:20 PM	A54767
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 3:52:20 PM	A54767
Magnesium	ND	0.25	1.0		mg/L	1	10/9/2018 3:52:20 PM	A54767
Manganese	0.00083	0.00039	0.0020	J	mg/L	1	10/9/2018 3:52:20 PM	A54767
Potassium	ND	0.11	1.0		mg/L	1	10/9/2018 3:52:20 PM	A54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 3:52:20 PM	A54767
Sodium	0.47	0.16	1.0	J	mg/L	1	10/9/2018 3:52:20 PM	A54767
Vanadium	ND	0.0019	0.050		mg/L	1	10/9/2018 3:52:20 PM	A54767
Zinc	0.0073	0.0021	0.010	J	mg/L	1	10/9/2018 3:52:20 PM	A54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/27/2018 2:49:47 PM	B54472
Arsenic	ND	0.00042	0.0010		mg/L	1	9/26/2018 1:40:35 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 1:40:35 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 1:40:35 PM	C54444
Uranium	ND	0.000096	0.00050		mg/L	1	9/26/2018 1:40:35 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:10:30 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB17
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 10:30:00 AM
Lab ID: 1809A73-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	10/5/2018 6:42:09 PM	40709
Beryllium	ND	0.00026	0.0020		mg/L	1	10/5/2018 6:42:09 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 6:42:09 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 6:42:09 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 6:42:09 PM	40709
Iron	ND	0.010	0.020		mg/L	1	10/5/2018 6:42:09 PM	40709
Manganese	ND	0.0011	0.0020		mg/L	1	10/5/2018 6:42:09 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 6:42:09 PM	40709
Vanadium	ND	0.00076	0.050		mg/L	1	10/5/2018 6:42:09 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 6:42:09 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	10/2/2018 12:39:37 PM	40709
Arsenic	ND	0.00041	0.0010		mg/L	1	10/2/2018 12:39:37 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 12:39:37 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 12:39:37 PM	40709
Uranium	ND	0.000068	0.00050		mg/L	1	10/2/2018 12:39:37 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:12:46 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 10:21:36 PM	G54282
Surr: BFB	94.1	0	69.3-150		%Rec	1	9/20/2018 10:21:36 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Acetone	0.99	0.79	10	J	µg/L	1	9/24/2018 3:50:07 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 3:50:07 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 3:50:07 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 3:50:07 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 3:50:07 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 3:50:07 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 3:50:07 PM	A54375
1,4-Dioxane	ND	4.1	10		µg/L	1	9/24/2018 3:50:07 PM	A54375
Surr: 1,2-Dichloroethane-d4	86.7	0	70-130		%Rec	1	9/24/2018 3:50:07 PM	A54375
Surr: 4-Bromofluorobenzene	92.8	0	70-130		%Rec	1	9/24/2018 3:50:07 PM	A54375
Surr: Dibromofluoromethane	84.6	0	70-130		%Rec	1	9/24/2018 3:50:07 PM	A54375
Surr: Toluene-d8	93.4	0	70-130		%Rec	1	9/24/2018 3:50:07 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 12:00:44 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 12:00:44 PM	40496
Surr: DNOP	104	0	76.7-135		%Rec	1	9/21/2018 12:00:44 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Benzoic acid	7.0	6.3	20	J	µg/L	1	9/24/2018 2:54:09 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 2:54:09 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 2:54:09 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 2:54:09 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 2:54:09 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 2:54:09 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 2:54:09 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 2:54:09 PM	40466
Surr: 2-Fluorophenol	51.0	0	15-74.1		%Rec	1	9/24/2018 2:54:09 PM	40466
Surr: Phenol-d5	37.1	0	15-59.8		%Rec	1	9/24/2018 2:54:09 PM	40466
Surr: 2,4,6-Tribromophenol	61.6	0	22.1-112		%Rec	1	9/24/2018 2:54:09 PM	40466
Surr: Nitrobenzene-d5	74.4	0	33.2-94		%Rec	1	9/24/2018 2:54:09 PM	40466
Surr: 2-Fluorobiphenyl	78.0	0	34-90.9		%Rec	1	9/24/2018 2:54:09 PM	40466
Surr: 4-Terphenyl-d14	93.0	0	15-149		%Rec	1	9/24/2018 2:54:09 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.70	0.16	0.50		mg/L	5	9/19/2018 10:45:04 AM	R54277
Chloride	63	0.91	2.5		mg/L	5	9/19/2018 10:45:04 AM	R54277
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/19/2018 10:45:04 AM	R54277
Bromide	ND	0.13	0.50		mg/L	5	9/19/2018 10:45:04 AM	R54277
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/19/2018 10:45:04 AM	R54277
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/19/2018 10:45:04 AM	R54277
Sulfate	170	1.0	2.5		mg/L	5	9/19/2018 10:45:04 AM	R54277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.017	0.00099	0.0020		mg/L	1	10/9/2018 3:56:43 PM	A54767
Beryllium	ND	0.00029	0.0020		mg/L	1	10/9/2018 3:56:43 PM	A54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 3:56:43 PM	A54767
Calcium	1.4	0.078	1.0		mg/L	1	10/9/2018 3:56:43 PM	A54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 3:56:43 PM	A54767
Copper	ND	0.0032	0.0060		mg/L	1	10/9/2018 3:56:43 PM	A54767
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 3:56:43 PM	A54767
Magnesium	ND	0.25	1.0		mg/L	1	10/9/2018 3:56:43 PM	A54767
Manganese	0.0039	0.00039	0.0020		mg/L	1	10/9/2018 3:56:43 PM	A54767
Potassium	0.60	0.11	1.0	J	mg/L	1	10/9/2018 3:56:43 PM	A54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 3:56:43 PM	A54767
Sodium	260	1.6	10		mg/L	10	10/9/2018 3:58:43 PM	A54767
Vanadium	ND	0.0019	0.050		mg/L	1	10/9/2018 3:56:43 PM	A54767
Zinc	0.011	0.0021	0.010		mg/L	1	10/9/2018 3:56:43 PM	A54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/27/2018 2:56:55 PM	B54472
Arsenic	0.00093	0.00042	0.0010	J	mg/L	1	9/26/2018 1:47:33 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 1:47:33 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 1:47:33 PM	C54444
Uranium	0.0075	0.000096	0.00050		mg/L	1	9/26/2018 1:47:33 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:24:16 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-5
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 11:40:00 AM
Lab ID: 1809A73-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.021	0.0010	0.0020		mg/L	1	10/5/2018 6:54:24 PM	40709
Beryllium	ND	0.00026	0.0020		mg/L	1	10/5/2018 6:54:24 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 6:54:24 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 6:54:24 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 6:54:24 PM	40709
Iron	ND	0.010	0.020		mg/L	1	10/5/2018 6:54:24 PM	40709
Manganese	0.0045	0.0011	0.0020		mg/L	1	10/5/2018 6:54:24 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 6:54:24 PM	40709
Vanadium	ND	0.00076	0.050		mg/L	1	10/5/2018 6:54:24 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 6:54:24 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	10/2/2018 12:41:58 PM	40709
Arsenic	0.0011	0.00041	0.0010		mg/L	1	10/2/2018 12:41:58 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 12:41:58 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 12:41:58 PM	40709
Uranium	0.0082	0.000068	0.00050		mg/L	1	10/2/2018 12:41:58 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000096	0.000038	0.00020	J	mg/L	1	10/5/2018 1:26:35 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 10:44:49 PM	G54282
Surr: BFB	90.6	0	69.3-150		%Rec	1	9/20/2018 10:44:49 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Methyl tert-butyl ether (MTBE)	10	0.32	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Acetone	1.9	0.79	10	J	µg/L	1	9/24/2018 4:19:31 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 4:19:31 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 4:19:31 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 4:19:31 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 4:19:31 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 4:19:31 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 4:19:31 PM	A54375
1,4-Dioxane	ND	4.1	10		µg/L	1	9/24/2018 4:19:31 PM	A54375
Surr: 1,2-Dichloroethane-d4	90.5	0	70-130		%Rec	1	9/24/2018 4:19:31 PM	A54375
Surr: 4-Bromofluorobenzene	92.0	0	70-130		%Rec	1	9/24/2018 4:19:31 PM	A54375
Surr: Dibromofluoromethane	86.8	0	70-130		%Rec	1	9/24/2018 4:19:31 PM	A54375
Surr: Toluene-d8	90.8	0	70-130		%Rec	1	9/24/2018 4:19:31 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 12:25:03 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 12:25:03 PM	40496
Surr: DNOP	101	0	76.7-135		%Rec	1	9/21/2018 12:25:03 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/26/2018 4:57:37 PM	40590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.052	0.00099	0.0020		mg/L	1	10/9/2018 4:00:45 PM	A54767
Beryllium	ND	0.00029	0.0020		mg/L	1	10/9/2018 4:00:45 PM	A54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 4:00:45 PM	A54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 4:00:45 PM	A54767
Copper	ND	0.0032	0.0060		mg/L	1	10/9/2018 4:00:45 PM	A54767
Iron	0.037	0.016	0.020		mg/L	1	10/9/2018 4:00:45 PM	A54767
Manganese	0.11	0.00039	0.0020	*	mg/L	1	10/9/2018 4:00:45 PM	A54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 4:00:45 PM	A54767
Vanadium	ND	0.0019	0.050		mg/L	1	10/9/2018 4:00:45 PM	A54767
Zinc	0.0068	0.0021	0.010	J	mg/L	1	10/9/2018 4:00:45 PM	A54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/27/2018 2:59:17 PM	B54472
Arsenic	0.0019	0.00042	0.0010		mg/L	1	9/26/2018 1:56:55 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 1:56:55 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 1:56:55 PM	C54444
Uranium	0.010	0.000096	0.00050		mg/L	1	9/26/2018 1:56:55 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000077	0.000038	0.00020	J	mg/L	1	10/5/2018 1:28:45 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-50
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 1:05:00 PM
Lab ID: 1809A73-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.069	0.0010	0.0020		mg/L	1	10/5/2018 7:12:50 PM	40709
Beryllium	ND	0.00026	0.0020		mg/L	1	10/5/2018 7:12:50 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:12:50 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 7:12:50 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:12:50 PM	40709
Iron	0.46	0.010	0.020	*	mg/L	1	10/5/2018 7:12:50 PM	40709
Manganese	0.12	0.0011	0.0020	*	mg/L	1	10/5/2018 7:12:50 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 7:12:50 PM	40709
Vanadium	ND	0.00076	0.050		mg/L	1	10/5/2018 7:12:50 PM	40709
Zinc	0.0055	0.0033	0.010	J	mg/L	1	10/5/2018 7:12:50 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	10/2/2018 12:44:22 PM	40709
Arsenic	0.0022	0.00041	0.0010		mg/L	1	10/2/2018 12:44:22 PM	40709
Lead	0.00079	0.00023	0.00050		mg/L	1	10/2/2018 12:44:22 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 12:44:22 PM	40709
Uranium	0.011	0.000068	0.00050		mg/L	1	10/2/2018 12:44:22 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000090	0.000038	0.00020	J	mg/L	1	10/5/2018 1:30:56 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 11:08:16 PM	G54282
Surr: BFB	92.0	0	69.3-150		%Rec	1	9/20/2018 11:08:16 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Methyl tert-butyl ether (MTBE)	1.1	0.32	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Acetone	1.0	0.79	10	J	µg/L	1	9/24/2018 4:48:52 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 4:48:52 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 4:48:52 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 4:48:52 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 4:48:52 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 4:48:52 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 4:48:52 PM	A54375
1,4-Dioxane	ND	4.1	10		µg/L	1	9/24/2018 4:48:52 PM	A54375
Surr: 1,2-Dichloroethane-d4	87.6	0	70-130		%Rec	1	9/24/2018 4:48:52 PM	A54375
Surr: 4-Bromofluorobenzene	92.3	0	70-130		%Rec	1	9/24/2018 4:48:52 PM	A54375
Surr: Dibromofluoromethane	84.7	0	70-130		%Rec	1	9/24/2018 4:48:52 PM	A54375
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	9/24/2018 4:48:52 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 12:49:35 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 12:49:35 PM	40496
Surr: DNOP	101	0	76.7-135		%Rec	1	9/21/2018 12:49:35 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	9/26/2018 5:42:49 PM	40590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.031	0.00099	0.0020		mg/L	1	10/9/2018 4:04:51 PM	A54767
Beryllium	ND	0.00029	0.0020		mg/L	1	10/9/2018 4:04:51 PM	A54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 4:04:51 PM	A54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 4:04:51 PM	A54767
Copper	ND	0.0032	0.0060		mg/L	1	10/9/2018 4:04:51 PM	A54767
Iron	0.080	0.016	0.020		mg/L	1	10/9/2018 4:04:51 PM	A54767
Manganese	0.026	0.00039	0.0020		mg/L	1	10/9/2018 4:04:51 PM	A54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 4:04:51 PM	A54767
Vanadium	ND	0.0019	0.050		mg/L	1	10/9/2018 4:04:51 PM	A54767
Zinc	0.0070	0.0021	0.010	J	mg/L	1	10/9/2018 4:04:51 PM	A54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/27/2018 3:06:27 PM	B54472
Arsenic	0.00062	0.00042	0.0010	J	mg/L	1	9/26/2018 1:59:16 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 1:59:16 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 1:59:16 PM	C54444
Uranium	0.0086	0.000096	0.00050		mg/L	1	9/26/2018 1:59:16 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:33:08 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-52
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018 3:05:00 PM
Lab ID: 1809A73-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.033	0.0010	0.0020		mg/L	1	10/5/2018 7:16:52 PM	40709
Beryllium	ND	0.00026	0.0020		mg/L	1	10/5/2018 7:16:52 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:16:52 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 7:16:52 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:16:52 PM	40709
Iron	0.32	0.010	0.020	*	mg/L	1	10/5/2018 7:16:52 PM	40709
Manganese	0.030	0.0011	0.0020		mg/L	1	10/5/2018 7:16:52 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 7:16:52 PM	40709
Vanadium	0.00091	0.00076	0.050	J	mg/L	1	10/5/2018 7:16:52 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 7:16:52 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	10/2/2018 12:46:43 PM	40709
Arsenic	0.00073	0.00041	0.0010	J	mg/L	1	10/2/2018 12:46:43 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 12:46:43 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 12:46:43 PM	40709
Uranium	0.0093	0.000068	0.00050		mg/L	1	10/2/2018 12:46:43 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:35:21 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 11:31:37 PM	G54282
Surr: BFB	88.5	0	69.3-150		%Rec	1	9/20/2018 11:31:37 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Acetone	1.3	0.79	10	J	µg/L	1	9/24/2018 5:18:13 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 5:18:13 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 5:18:13 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 5:18:13 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 5:18:13 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 5:18:13 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 5:18:13 PM	A54375
1,4-Dioxane	ND	4.1	10		µg/L	1	9/24/2018 5:18:13 PM	A54375
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	1	9/24/2018 5:18:13 PM	A54375
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	9/24/2018 5:18:13 PM	A54375
Surr: Dibromofluoromethane	88.0	0	70-130		%Rec	1	9/24/2018 5:18:13 PM	A54375
Surr: Toluene-d8	95.4	0	70-130		%Rec	1	9/24/2018 5:18:13 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 1:13:59 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 1:13:59 PM	40496
Surr: DNOP	101	0	76.7-135		%Rec	1	9/21/2018 1:13:59 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Benzoic acid	7.0	6.3	20	J	µg/L	1	9/24/2018 3:23:53 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 3:23:53 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 3:23:53 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 3:23:53 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 3:23:53 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 3:23:53 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 3:23:53 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 3:23:53 PM	40466
Surr: 2-Fluorophenol	54.2	0	15-74.1		%Rec	1	9/24/2018 3:23:53 PM	40466
Surr: Phenol-d5	42.2	0	15-59.8		%Rec	1	9/24/2018 3:23:53 PM	40466
Surr: 2,4,6-Tribromophenol	69.3	0	22.1-112		%Rec	1	9/24/2018 3:23:53 PM	40466
Surr: Nitrobenzene-d5	77.6	0	33.2-94		%Rec	1	9/24/2018 3:23:53 PM	40466
Surr: 2-Fluorobiphenyl	72.4	0	34-90.9		%Rec	1	9/24/2018 3:23:53 PM	40466
Surr: 4-Terphenyl-d14	84.3	0	15-149		%Rec	1	9/24/2018 3:23:53 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.71	0.16	0.50		mg/L	5	9/19/2018 11:09:53 AM	R54277
Chloride	62	0.91	2.5		mg/L	5	9/19/2018 11:09:53 AM	R54277
Nitrogen, Nitrite (As N)	ND	0.24	0.50	H	mg/L	5	9/19/2018 11:09:53 AM	R54277
Bromide	ND	0.13	0.50		mg/L	5	9/19/2018 11:09:53 AM	R54277
Nitrogen, Nitrate (As N)	ND	0.033	0.50	H	mg/L	5	9/19/2018 11:09:53 AM	R54277
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/19/2018 11:09:53 AM	R54277
Sulfate	170	1.0	2.5		mg/L	5	9/19/2018 11:09:53 AM	R54277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.017	0.00099	0.0020		mg/L	1	10/9/2018 4:15:28 PM	A54767
Beryllium	ND	0.00029	0.0020		mg/L	1	10/9/2018 4:15:28 PM	A54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 4:15:28 PM	A54767
Calcium	1.4	0.078	1.0		mg/L	1	10/9/2018 4:15:28 PM	A54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 4:15:28 PM	A54767
Copper	ND	0.0032	0.0060		mg/L	1	10/9/2018 4:15:28 PM	A54767
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 4:15:28 PM	A54767
Magnesium	ND	0.25	1.0		mg/L	1	10/9/2018 4:15:28 PM	A54767
Manganese	0.0038	0.00039	0.0020		mg/L	1	10/9/2018 4:15:28 PM	A54767
Potassium	0.63	0.11	1.0	J	mg/L	1	10/9/2018 4:15:28 PM	A54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 4:15:28 PM	A54767
Sodium	260	1.6	10		mg/L	10	10/9/2018 4:17:30 PM	A54767
Vanadium	ND	0.0019	0.050		mg/L	1	10/9/2018 4:15:28 PM	A54767
Zinc	0.0085	0.0021	0.010	J	mg/L	1	10/9/2018 4:15:28 PM	A54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/27/2018 3:08:49 PM	B54472
Arsenic	0.00095	0.00042	0.0010	J	mg/L	1	9/26/2018 2:01:35 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 2:01:35 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 2:01:35 PM	C54444
Uranium	0.0075	0.000096	0.00050		mg/L	1	9/26/2018 2:01:35 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:37:34 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP18
Project: Annual 3rd Quarter GW Sampling 2018
Collection Date: 9/17/2018
Lab ID: 1809A73-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.020	0.0010	0.0020		mg/L	1	10/5/2018 7:20:54 PM	40709
Beryllium	ND	0.00026	0.0020		mg/L	1	10/5/2018 7:20:54 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:20:54 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 7:20:54 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:20:54 PM	40709
Iron	ND	0.010	0.020		mg/L	1	10/5/2018 7:20:54 PM	40709
Manganese	0.0045	0.0011	0.0020		mg/L	1	10/5/2018 7:20:54 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 7:20:54 PM	40709
Vanadium	ND	0.00076	0.050		mg/L	1	10/5/2018 7:20:54 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 7:20:54 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	10/2/2018 12:49:03 PM	40709
Arsenic	0.0011	0.00041	0.0010		mg/L	1	10/2/2018 12:49:03 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 12:49:03 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 12:49:03 PM	40709
Uranium	0.0083	0.000068	0.00050		mg/L	1	10/2/2018 12:49:03 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 1:39:48 PM	40812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180921051
Project Name: 1809A73

Analytical Results Report

Sample Number	180921051-001	**Sampling Date**	9/17/2018	**Date/Time Received**	9/21/2018	11:42 AM	
Client Sample ID	1809A73-001G / FB17	**Sampling Time**	10:30 AM				
Matrix	Water						
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Sample Number	180921051-002	**Sampling Date**	9/17/2018	**Date/Time Received**	9/21/2018	11:42 AM	
Client Sample ID	1809A73-002G / MW-5	**Sampling Time**	11:40 AM				
Matrix	Water						
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Sample Number	180921051-003	**Sampling Date**	9/17/2018	**Date/Time Received**	9/21/2018	11:42 AM	
Client Sample ID	1809A73-006G / DUP18	**Sampling Time**					
Matrix	Water						
Comments							

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180921051
Project Name: 1809A73

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.540	mg/L	0.5	108.0	90-110	9/24/2018	9/25/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180921029-001	Cyanide	ND	0.537	mg/L	0.5	107.4	80-120	9/24/2018	9/25/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.543	mg/L	0.5	108.6	1.1	0-20	9/24/2018	9/25/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/24/2018	9/25/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0016	0.0020	0.002000	0	82.5	50	150			J
Beryllium	0.0017	0.0020	0.002000	0	86.0	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Calcium	0.49	1.0	0.5000	0	99.0	50	150			J
Chromium	0.0055	0.0060	0.006000	0	91.7	50	150			J
Copper	0.0046	0.0060	0.006000	0	76.2	50	150			J
Iron	0.023	0.020	0.02000	0	117	50	150			
Magnesium	0.50	1.0	0.5000	0	100	50	150			J
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Potassium	0.55	1.0	0.5000	0	109	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.8	50	150			J
Sodium	0.69	1.0	0.5000	0	138	50	150			J
Vanadium	0.0091	0.050	0.01000	0	90.8	50	150			J
Zinc	0.0055	0.010	0.005000	0	110	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.9	85	115			
Beryllium	0.49	0.0020	0.5000	0	98.9	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.1	85	115			
Chromium	0.50	0.0060	0.5000	0	99.4	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.48	0.020	0.5000	0	96.7	85	115			
Magnesium	52	1.0	50.00	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	97.0	85	115			
Potassium	51	1.0	50.00	0	101	85	115			
Silver	0.093	0.0050	0.1000	0	92.7	85	115			
Sodium	53	1.0	50.00	0	106	85	115			
Vanadium	0.48	0.050	0.5000	0	95.3	85	115			
Zinc	0.48	0.010	0.5000	0	95.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **1809A73-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB17** Batch ID: **40709** RunNo: **54686**

Prep Date: **10/1/2018** Analysis Date: **10/5/2018** SeqNo: **1814527** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	70	130			
Beryllium	0.51	0.0020	0.5000	0	101	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130			
Chromium	0.47	0.0060	0.5000	0	94.9	70	130			
Copper	0.49	0.0060	0.5000	0	98.9	70	130			
Iron	0.47	0.020	0.5000	0	94.1	70	130			
Manganese	0.47	0.0020	0.5000	0	94.8	70	130			
Silver	0.096	0.0050	0.1000	0	96.2	70	130			
Vanadium	0.49	0.050	0.5000	0	98.2	70	130			
Zinc	0.49	0.010	0.5000	0	98.1	70	130			

Sample ID **1809A73-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **FB17** Batch ID: **40709** RunNo: **54686**

Prep Date: **10/1/2018** Analysis Date: **10/5/2018** SeqNo: **1814528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	70	130	0.378	20	
Beryllium	0.51	0.0020	0.5000	0	102	70	130	0.879	20	
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130	0.936	20	
Chromium	0.48	0.0060	0.5000	0	96.0	70	130	1.17	20	
Copper	0.50	0.0060	0.5000	0	99.4	70	130	0.563	20	
Iron	0.48	0.020	0.5000	0	95.8	70	130	1.76	20	
Manganese	0.48	0.0020	0.5000	0	95.5	70	130	0.752	20	
Silver	0.098	0.0050	0.1000	0	98.0	70	130	1.84	20	
Vanadium	0.50	0.050	0.5000	0	99.2	70	130	0.983	20	
Zinc	0.49	0.010	0.5000	0	98.9	70	130	0.737	20	

Sample ID **1809A73-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

Client ID: **MW-5** Batch ID: **40709** RunNo: **54686**

Prep Date: **10/1/2018** Analysis Date: **10/5/2018** SeqNo: **1814533** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.02075	98.3	70	130			
Beryllium	0.52	0.0020	0.5000	0	103	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.0	70	130			
Chromium	0.48	0.0060	0.5000	0	95.9	70	130			
Copper	0.52	0.0060	0.5000	0	104	70	130			
Iron	0.48	0.020	0.5000	0	95.9	70	130			
Manganese	0.48	0.0020	0.5000	0.004510	95.7	70	130			
Silver	0.10	0.0050	0.1000	0	99.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**1809A73-002FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MW-5**	Batch ID:	**40709**		RunNo:	**54686**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814533**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vanadium	0.50	0.050	0.5000	0	99.6	70	130			
Zinc	0.50	0.010	0.5000	0	99.3	70	130			

Sample ID	**1809A73-002FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**MW-5**	Batch ID:	**40709**		RunNo:	**54686**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814534**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.02075	98.2	70	130	0.0879	20	
Beryllium	0.51	0.0020	0.5000	0	102	70	130	0.803	20	
Cadmium	0.50	0.0020	0.5000	0	99.5	70	130	0.510	20	
Chromium	0.48	0.0060	0.5000	0	97.0	70	130	1.12	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	0.161	20	
Iron	0.48	0.020	0.5000	0	95.7	70	130	0.192	20	
Manganese	0.48	0.0020	0.5000	0.004510	95.3	70	130	0.407	20	
Silver	0.10	0.0050	0.1000	0	101	70	130	0.919	20	
Vanadium	0.49	0.050	0.5000	0	98.9	70	130	0.685	20	
Zinc	0.50	0.010	0.5000	0	100	70	130	1.15	20	

Sample ID	**MB-40709**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40709**		RunNo:	**54686**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814629**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40709**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40709**		RunNo:	**54686**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**		SeqNo:	**1814630**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**LLLCS-40709**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40709**	RunNo:	**54686**
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Beryllium	0.0019	0.0020	0.002000	0	96.5	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Chromium	0.0055	0.0060	0.006000	0	91.0	50	150			J
Copper	0.0032	0.0060	0.006000	0	53.7	50	150			J
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Vanadium	0.0096	0.050	0.01000	0	95.6	50	150			J
Zinc	0.0074	0.010	0.005000	0	148	50	150			J

Sample ID	**LCS-40709**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54686**
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.3	85	115			
Beryllium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.47	0.020	0.5000	0	93.4	85	115			
Manganese	0.47	0.0020	0.5000	0	95.0	85	115			
Silver	0.096	0.0050	0.1000	0	95.5	85	115			
Vanadium	0.49	0.050	0.5000	0	98.0	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804116** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-C**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804117** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	92.2	50	150			J
Lead	0.00045	0.00050	0.0005000	0	89.8	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.1	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.8	50	150			J

Sample ID **MSLCS-C**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804118** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.5	85	115			
Lead	0.011	0.00050	0.01250	0	91.5	85	115			
Selenium	0.023	0.0010	0.02500	0	90.1	85	115			
Uranium	0.011	0.00050	0.01250	0	88.9	85	115			

Sample ID **1809A73-001ELLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB17**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.6	70	130			
Lead	0.011	0.00050	0.01250	0	88.9	70	130			
Selenium	0.023	0.0010	0.02500	0	90.3	70	130			
Uranium	0.011	0.00050	0.01250	0	87.5	70	130			

Sample ID **1809A73-001ELLMS**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB17**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**1809A73-001ELLMS**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB17**	Batch ID:	**C54444**		RunNo:	**54444**				
Prep Date:		Analysis Date:	**9/26/2018**		SeqNo:	**1804145**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	90.0	70	130	0.363	20	
Lead	0.011	0.00050	0.01250	0	88.8	70	130	0.131	20	
Selenium	0.022	0.0010	0.02500	0	89.3	70	130	1.13	20	
Uranium	0.011	0.00050	0.01250	0	86.6	70	130	0.958	20	

Sample ID	**MB-B**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B54472**		RunNo:	**54472**				
Prep Date:		Analysis Date:	**9/27/2018**		SeqNo:	**1805621**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B54472**		RunNo:	**54472**				
Prep Date:		Analysis Date:	**9/27/2018**		SeqNo:	**1805622**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00093	0.0010	0.001000	0	93.1	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B54472**		RunNo:	**54472**				
Prep Date:		Analysis Date:	**9/27/2018**		SeqNo:	**1805623**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID	**1809A73-001EMSLL**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB17**	Batch ID:	**B54472**		RunNo:	**54472**				
Prep Date:		Analysis Date:	**9/27/2018**		SeqNo:	**1805626**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	97.2	70	130			

Sample ID	**1809A73-001EMSDL**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB17**	Batch ID:	**B54472**		RunNo:	**54472**				
Prep Date:		Analysis Date:	**9/27/2018**		SeqNo:	**1805627**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.025	0.0010	0.02500	0	98.4	70	130	1.25	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**		RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**		SeqNo: **1809799**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00097	0.0010	0.001000	0	97.4	50	150			J
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.7	50	150			J
Selenium	0.00096	0.0010	0.001000	0	95.9	50	150			J

Sample ID	**MSLCS-40709**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **40709**		RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**		SeqNo: **1809800**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	105	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			

Sample ID	**MB-40709**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**		RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**		SeqNo: **1809801**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MB-40709**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**		RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**		SeqNo: **1809803**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**		RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**		SeqNo: **1809804**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**MSLCS-40709**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54582**
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**	SeqNo:	**1809805** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**MB-40812**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40812**			RunNo: **54677**					
Prep Date:	**10/4/2018**	Analysis Date: **10/5/2018**			SeqNo: **1814245**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40812**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40812**			RunNo: **54677**					
Prep Date:	**10/4/2018**	Analysis Date: **10/5/2018**			SeqNo: **1814246**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.7	80	120			

Sample ID	**1809A73-001FMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB17**	Batch ID: **40812**			RunNo: **54677**					
Prep Date:	**10/4/2018**	Analysis Date: **10/5/2018**			SeqNo: **1814249**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	95.7	75	125			

Sample ID	**1809A73-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB17**	Batch ID: **40812**			RunNo: **54677**					
Prep Date:	**10/4/2018**	Analysis Date: **10/5/2018**			SeqNo: **1814250**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	0	89.2	75	125	7.03	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**
15-Oct-18

Client: Andeavor Gallup
Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54277**	RunNo: **54277**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1796423** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54277**	RunNo: **54277**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1796424** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	105	90	110			
Chloride	4.8	0.50	5.000	0	95.2	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.7	90	110			
Bromide	2.4	0.10	2.500	0	97.3	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.4	0.50	10.00	0	94.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID	**MB-40590**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805017**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40590**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805019**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	105	70	130			

Sample ID	**1809A73-003CMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-50**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805023**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.061	0.0093	0.09333	0	65.6	55	125			

Sample ID	**1809A73-003CMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-50**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805024**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.075	0.0094	0.09409	0	79.3	55	125	19.8	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **1809A73-001BMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **FB17** Batch ID: **40496** RunNo: **54321**

Prep Date: **9/21/2018** Analysis Date: **9/21/2018** SeqNo: **1798015** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	82.8	143			
Surr: DNOP	0.49		0.5000		98.9	76.7	135			

Sample ID **1809A73-001BMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **FB17** Batch ID: **40496** RunNo: **54321**

Prep Date: **9/21/2018** Analysis Date: **9/21/2018** SeqNo: **1798016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	82.8	143	4.45	20	
Surr: DNOP	0.48		0.5000		96.5	76.7	135	0	0	

Sample ID **LCS-40496** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **LCSW** Batch ID: **40496** RunNo: **54321**

Prep Date: **9/21/2018** Analysis Date: **9/21/2018** SeqNo: **1798021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.49		0.5000		97.9	76.7	135			

Sample ID **MB-40496** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range**

Client ID: **PBW** Batch ID: **40496** RunNo: **54321**

Prep Date: **9/21/2018** Analysis Date: **9/21/2018** SeqNo: **1798022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.97		1.000		97.4	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		95.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	79.5	127			
Surr: BFB	22		20.00		112	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.28	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
1,4-Dioxane	ND	10								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800082** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	83.3	70	130			
Toluene	18	1.0	20.00	0	91.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800082** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	19	1.0	20.00	0	97.4	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	79.0	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	73.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.4	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.5	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Sample ID **1809a73-002a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-5**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800174** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.5	60.5	137			
Toluene	19	1.0	20.00	0	93.7	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.2	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.1	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

Sample ID **1809a73-002a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-5**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800175** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.5	60.5	137	0.987	20	
Toluene	19	1.0	20.00	0	93.3	70	130	0.377	20	
Chlorobenzene	20	1.0	20.00	0	99.8	70	130	2.20	20	
1,1-Dichloroethene	18	1.0	20.00	0	87.8	70	130	7.02	20	
Trichloroethene (TCE)	16	1.0	20.00	0	79.9	70	130	2.19	20	
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.2		10.00		92.4	70	130	0	0	
Surr: Dibromofluoromethane	8.9		10.00		89.4	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		94.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**
15-Oct-18

Client: Andeavor Gallup
Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **lcs-40466**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798877** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	72.3	55.1	104			
4-Chloro-3-methylphenol	170	10	200.0	0	85.2	57	115			
2-Chlorophenol	140	10	200.0	0	71.6	43.4	112			
1,4-Dichlorobenzene	68	10	100.0	0	68.5	38	95.2			
2,4-Dinitrotoluene	66	10	100.0	0	65.6	55.1	96.7			
N-Nitrosodi-n-propylamine	84	10	100.0	0	83.5	55	112			
4-Nitrophenol	100	10	200.0	0	50.9	16.6	93			
Pentachlorophenol	100	20	200.0	0	52.4	43.2	104			
Phenol	120	10	200.0	0	57.6	21.3	85.7			
Pyrene	79	10	100.0	0	78.7	64.9	105			
1,2,4-Trichlorobenzene	77	10	100.0	0	76.9	42.6	107			
Surr: 2-Fluorophenol	120		200.0		59.2	15	74.1			
Surr: Phenol-d5	130		200.0		63.1	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.1	22.1	112			
Surr: Nitrobenzene-d5	70		100.0		70.0	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		69.5	34	90.9			
Surr: 4-Terphenyl-d14	85		100.0		85.5	15	149			

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809A73**
15-Oct-18

Client: Andeavor Gallup
Project: Annual 3rd Quarter GW Sampling 2018

Sample ID **mb-40466**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **40466**		RunNo: **54318**		
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**		SeqNo: **1798880**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	66		200.0		32.8	15	74.1			
Surr: Phenol-d5	89		200.0		44.5	15	59.8			
Surr: 2,4,6-Tribromophenol	75		200.0		37.6	22.1	112			
Surr: Nitrobenzene-d5	68		100.0		68.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	34	90.9			
Surr: 4-Terphenyl-d14	86		100.0		85.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1809A73 | RcptNo: 1

Received By: Jazzmine Burkhead 9/19/2018 8:40:00 AM

Completed By: Ashley Gallegos 9/19/2018 10:03:01 AM

Reviewed By: MJ 09/20/18 labeled by: ENM 9/20/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 13,3 (<2 or >12 unless noted)

Adjusted? NO

Checked by: ENM 9/20/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809A73	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Cyanide		Air Bubbles (Y or N)
9/17/18	1030	H_2O	FB17	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NaOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/18/18	0700			09/19/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: *** ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/17/18	1140	H_2O	MW-5	40ml VOA-5	HCl	1809A73 -002			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NAOH															X		

Date	Time	Relinquished by:	Received by:	Date	Time
9/18/18	0700		Burkhead	09/19/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) **EXCEL**

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809A73	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	General Chemistry			Air Bubbles (Y or N)
9/17/18	1305	H_2O	OW-50	40ml VOA-5	HCl	-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				
						ENM 9/20/18 Sample not received																
9/17/18	—	H_2O	TRIP BLANK	~~40 ML VOA-3~~	HCl	-004										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/18/18	0700		Tracy Burkhard	09/19/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809A73	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	General Chemistry			Air Bubbles (Y or N)
9/17/18	1505	H_2O	OW-52	40ml VOA-5	HCl	-005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

JAB 09/19/18

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/18/18	0700				
Date:	Time:	Relinquished by:	Received by:	Date	Time
				09/19/18	08:40

Remarks: Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809A73	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Cyanide		Air Bubbles (Y or N)
9/17/18	—	H_2O	DUP18	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NaOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/18/18	0700		Jessie Burkhead	09/19/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180921051
Project Name: 1809A73

Analytical Results Report

Sample Number 180921051-001 **Sampling Date** 9/17/2018 **Date/Time Received** 9/21/2018 11:42 AM
Client Sample ID 1809A73-001G / FB17 **Sampling Time** 10:30 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Sample Number 180921051-002 **Sampling Date** 9/17/2018 **Date/Time Received** 9/21/2018 11:42 AM
Client Sample ID 1809A73-002G / MW-5 **Sampling Time** 11:40 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Sample Number 180921051-003 **Sampling Date** 9/17/2018 **Date/Time Received** 9/21/2018 11:42 AM
Client Sample ID 1809A73-006G / DUP18 **Sampling Time**
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2018 11:50:00 AM	MER	EPA 335.4	

Authorized Signature

Todd Taruscio, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 180921051
Project Name: 1809A73

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.540	mg/L	0.5	108.0	90-110	9/24/2018	9/25/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180921029-001	Cyanide	ND	0.537	mg/L	0.5	107.4	80-120	9/24/2018	9/25/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.543	mg/L	0.5	108.6	1.1	0-20	9/24/2018	9/25/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/24/2018	9/25/2018

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013;NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 18, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: Annual 2018 Groundwater Sampling OrderNo.: 1809B69

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/21/2018 11:30:15 AM	G54343
Surr: BFB	91.6	0	69.3-150		%Rec	1	9/21/2018 11:30:15 AM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Acetone	4.1	0.79	10	J	µg/L	1	9/24/2018 5:47:32 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 5:47:32 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 5:47:32 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 5:47:32 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 5:47:32 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 5:47:32 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 5:47:32 PM	A54375
Surr: 1,2-Dichloroethane-d4	88.1	0	70-130		%Rec	1	9/24/2018 5:47:32 PM	A54375
Surr: 4-Bromofluorobenzene	97.7	0	70-130		%Rec	1	9/24/2018 5:47:32 PM	A54375
Surr: Dibromofluoromethane	86.4	0	70-130		%Rec	1	9/24/2018 5:47:32 PM	A54375
Surr: Toluene-d8	97.2	0	70-130		%Rec	1	9/24/2018 5:47:32 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 6:08:26 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 6:08:26 PM	40496
Surr: DNOP	106	0	76.7-135		%Rec	1	9/21/2018 6:08:26 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.7	0.16	0.50		mg/L	5	10/4/2018 12:35:52 PM	R54671
Chloride	48	0.91	2.5		mg/L	5	10/4/2018 12:35:52 PM	R54671
Bromide	0.14	0.13	0.50	J	mg/L	5	10/4/2018 12:35:52 PM	R54671
Phosphorus, Orthophosphate (As P)	0.91	0.15	2.5	JH	mg/L	5	10/4/2018 12:35:52 PM	R54671
Sulfate	270	2.5	10		mg/L	20	10/4/2018 12:48:44 PM	R54671
Nitrate+Nitrite as N	0.40	0.079	1.0	J	mg/L	5	10/4/2018 1:14:28 PM	R54671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.018	0.00099	0.0020		mg/L	1	10/9/2018 5:13:04 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:13:04 PM	B54767
Calcium	2.1	0.078	1.0		mg/L	1	10/9/2018 5:13:04 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:13:04 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 9:36:20 PM	A54839
Iron	0.17	0.016	0.020		mg/L	1	10/9/2018 5:13:04 PM	B54767
Magnesium	0.39	0.25	1.0	J	mg/L	1	10/9/2018 5:13:04 PM	B54767
Manganese	0.012	0.00039	0.0020		mg/L	1	10/9/2018 5:13:04 PM	B54767
Potassium	0.72	0.11	1.0	J	mg/L	1	10/9/2018 5:13:04 PM	B54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 5:13:04 PM	B54767
Sodium	300	0.82	5.0		mg/L	5	10/11/2018 9:38:17 PM	A54839
Zinc	0.0050	0.0021	0.010	J	mg/L	1	10/9/2018 5:13:04 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00077	0.00042	0.0010	J	mg/L	1	9/27/2018 3:15:56 PM	B54472
Lead	ND	0.00017	0.00050		mg/L	1	9/27/2018 3:15:56 PM	B54472
Selenium	ND	0.00076	0.0010		mg/L	1	9/27/2018 3:15:56 PM	B54472
Uranium	0.0059	0.000096	0.00050		mg/L	1	9/27/2018 3:15:56 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000050	0.000038	0.00020	J	mg/L	1	10/8/2018 4:22:30 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 8:50:00 AM
Lab ID: 1809B69-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.050	0.0010	0.0020		mg/L	1	10/5/2018 7:35:28 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:35:28 PM	40709
Chromium	0.0060	0.0018	0.0060		mg/L	1	10/5/2018 7:35:28 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:35:28 PM	40709
Iron	2.0	0.051	0.10	*	mg/L	5	10/5/2018 7:37:20 PM	40709
Manganese	0.059	0.0011	0.0020	*	mg/L	1	10/5/2018 7:35:28 PM	40709
Silver	0.0035	0.0012	0.0050	J	mg/L	1	10/5/2018 7:35:28 PM	40709
Zinc	0.015	0.0033	0.010		mg/L	1	10/5/2018 7:35:28 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	10/2/2018 12:58:29 PM	40709
Lead	0.0024	0.0011	0.0025	J	mg/L	5	10/2/2018 12:58:29 PM	40709
Selenium	ND	0.0049	0.0050		mg/L	5	10/2/2018 12:58:29 PM	40709
Uranium	0.0055	0.00034	0.0025		mg/L	5	10/2/2018 12:58:29 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	10/8/2018 4:24:47 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/21/2018 11:53:33 AM	G54343
Surr: BFB	92.2	0	69.3-150		%Rec	1	9/21/2018 11:53:33 AM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Toluene	0.46	0.17	1.0	J	µg/L	1	9/24/2018 6:16:48 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Acetone	3.9	0.79	10	J	µg/L	1	9/24/2018 6:16:48 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 6:16:48 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 6:16:48 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 6:16:48 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 6:16:48 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 6:16:48 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 6:16:48 PM	A54375
Surr: 1,2-Dichloroethane-d4	90.3	0	70-130		%Rec	1	9/24/2018 6:16:48 PM	A54375
Surr: 4-Bromofluorobenzene	91.8	0	70-130		%Rec	1	9/24/2018 6:16:48 PM	A54375
Surr: Dibromofluoromethane	88.7	0	70-130		%Rec	1	9/24/2018 6:16:48 PM	A54375
Surr: Toluene-d8	95.5	0	70-130		%Rec	1	9/24/2018 6:16:48 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 6:32:52 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 6:32:52 PM	40496
Surr: DNOP	105	0	76.7-135		%Rec	1	9/21/2018 6:32:52 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.031	0.10		mg/L	1	9/20/2018 10:31:50 AM	R54332
Chloride	ND	0.18	0.50		mg/L	1	9/20/2018 10:31:50 AM	R54332
Bromide	ND	0.027	0.10		mg/L	1	9/20/2018 10:31:50 AM	R54332
Phosphorus, Orthophosphate (As P)	0.17	0.093	0.50	JH	mg/L	1	9/20/2018 10:31:50 AM	R54332
Sulfate	ND	0.21	0.50		mg/L	1	9/20/2018 10:31:50 AM	R54332
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	10/4/2018 1:27:19 PM	R54671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/9/2018 5:17:08 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:17:08 PM	B54767
Calcium	ND	0.078	1.0		mg/L	1	10/9/2018 5:17:08 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:17:08 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 9:40:11 PM	A54839
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 5:17:08 PM	B54767
Magnesium	ND	0.25	1.0		mg/L	1	10/9/2018 5:17:08 PM	B54767
Manganese	ND	0.00039	0.0020		mg/L	1	10/9/2018 5:17:08 PM	B54767
Potassium	ND	0.11	1.0		mg/L	1	10/9/2018 5:17:08 PM	B54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 5:17:08 PM	B54767
Sodium	ND	0.16	1.0		mg/L	1	10/11/2018 9:40:11 PM	A54839
Zinc	0.0099	0.0021	0.010	J	mg/L	1	10/9/2018 5:17:08 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/26/2018 2:25:01 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 2:25:01 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 2:25:01 PM	C54444
Uranium	ND	0.000096	0.00050		mg/L	1	9/26/2018 2:25:01 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000055	0.000038	0.00020	J	mg/L	1	10/8/2018 4:27:05 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB18
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 10:10:00 AM
Lab ID: 1809B69-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	10/5/2018 7:39:06 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:39:06 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 7:39:06 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:39:06 PM	40709
Iron	ND	0.010	0.020		mg/L	1	10/5/2018 7:39:06 PM	40709
Manganese	ND	0.0011	0.0020		mg/L	1	10/5/2018 7:39:06 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 7:39:06 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 7:39:06 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	10/2/2018 1:05:38 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 1:05:38 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:05:38 PM	40709
Uranium	ND	0.000068	0.00050		mg/L	1	10/2/2018 1:05:38 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000048	0.000038	0.00020	J	mg/L	1	10/8/2018 4:29:23 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/21/2018 12:16:52 PM	G54343
Surr: BFB	96.7	0	69.3-150		%Rec	1	9/21/2018 12:16:52 PM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Acetone	1.9	0.79	10	J	µg/L	1	9/24/2018 6:45:55 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 6:45:55 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 6:45:55 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 6:45:55 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 6:45:55 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 6:45:55 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 6:45:55 PM	A54375
Surr: 1,2-Dichloroethane-d4	88.7	0	70-130		%Rec	1	9/24/2018 6:45:55 PM	A54375
Surr: 4-Bromofluorobenzene	97.7	0	70-130		%Rec	1	9/24/2018 6:45:55 PM	A54375
Surr: Dibromofluoromethane	86.6	0	70-130		%Rec	1	9/24/2018 6:45:55 PM	A54375
Surr: Toluene-d8	99.8	0	70-130		%Rec	1	9/24/2018 6:45:55 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 6:57:10 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 6:57:10 PM	40496
Surr: DNOP	106	0	76.7-135		%Rec	1	9/21/2018 6:57:10 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.3	0.16	0.50		mg/L	5	9/20/2018 10:57:33 AM	R54332
Chloride	38	0.91	2.5		mg/L	5	9/20/2018 10:57:33 AM	R54332
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/20/2018 10:57:33 AM	R54332
Bromide	0.18	0.13	0.50	J	mg/L	5	9/20/2018 10:57:33 AM	R54332
Nitrogen, Nitrate (As N)	0.061	0.033	0.50	J	mg/L	5	9/20/2018 10:57:33 AM	R54332
Phosphorus, Orthophosphate (As P)	0.85	0.46	2.5	J	mg/L	5	9/20/2018 10:57:33 AM	R54332
Sulfate	320	4.1	10		mg/L	20	9/20/2018 11:10:25 AM	R54332

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.035	0.00099	0.0020		mg/L	1	10/9/2018 5:21:31 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:21:31 PM	B54767
Calcium	3.6	0.078	1.0		mg/L	1	10/9/2018 5:21:31 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:21:31 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 9:42:04 PM	A54839
Iron	0.15	0.016	0.020		mg/L	1	10/9/2018 5:21:31 PM	B54767
Magnesium	0.56	0.25	1.0	J	mg/L	1	10/9/2018 5:21:31 PM	B54767
Manganese	0.021	0.00039	0.0020		mg/L	1	10/9/2018 5:21:31 PM	B54767
Potassium	1.0	0.11	1.0		mg/L	1	10/9/2018 5:21:31 PM	B54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 5:21:31 PM	B54767
Sodium	350	0.82	5.0		mg/L	5	10/11/2018 9:49:39 PM	A54839
Zinc	0.0072	0.0021	0.010	J	mg/L	1	10/9/2018 5:21:31 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	9/26/2018 2:29:40 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 2:29:40 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 2:29:40 PM	C54444
Uranium	0.0011	0.000096	0.00050		mg/L	1	9/26/2018 2:29:40 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	10/8/2018 4:31:41 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 11:15:00 AM
Lab ID: 1809B69-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.24	0.0010	0.0020		mg/L	1	10/5/2018 7:43:31 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:43:31 PM	40709
Chromium	0.027	0.0018	0.0060		mg/L	1	10/5/2018 7:43:31 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:43:31 PM	40709
Iron	3.9	0.051	0.10	*	mg/L	5	10/5/2018 7:45:16 PM	40709
Manganese	0.16	0.0011	0.0020	*	mg/L	1	10/5/2018 7:43:31 PM	40709
Silver	0.012	0.0012	0.0050		mg/L	1	10/5/2018 7:43:31 PM	40709
Zinc	0.017	0.0033	0.010		mg/L	1	10/5/2018 7:43:31 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0022	0.0021	0.0050	J	mg/L	5	10/2/2018 1:10:23 PM	40709
Lead	0.0030	0.0011	0.0025		mg/L	5	10/2/2018 1:10:23 PM	40709
Selenium	ND	0.0049	0.0050		mg/L	5	10/2/2018 1:10:23 PM	40709
Uranium	0.0017	0.00034	0.0025	J	mg/L	5	10/2/2018 1:10:23 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	10/8/2018 4:34:00 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.25	0.024	0.050		mg/L	1	9/21/2018 12:40:21 PM	G54343
Surr: BFB	1430	0	69.3-150	S	%Rec	1	9/21/2018 12:40:21 PM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Methyl tert-butyl ether (MTBE)	11	0.32	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Acetone	6.7	0.79	10	J	µg/L	1	9/24/2018 7:15:29 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 7:15:29 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 7:15:29 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 7:15:29 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 7:15:29 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 7:15:29 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 7:15:29 PM	A54375
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%Rec	1	9/24/2018 7:15:29 PM	A54375
Surr: 4-Bromofluorobenzene	97.0	0	70-130		%Rec	1	9/24/2018 7:15:29 PM	A54375
Surr: Dibromofluoromethane	87.0	0	70-130		%Rec	1	9/24/2018 7:15:29 PM	A54375
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	9/24/2018 7:15:29 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 7:21:35 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 7:21:35 PM	40496
Surr: DNOP	109	0	76.7-135		%Rec	1	9/21/2018 7:21:35 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.16	0.50		mg/L	5	9/20/2018 11:23:17 AM	R54332
Chloride	2900	91	250		mg/L	500	10/10/2018 1:13:44 PM	R54788
Nitrogen, Nitrite (As N)	ND	0.96	2.0		mg/L	20	9/20/2018 11:36:08 AM	R54332
Bromide	2.3	0.13	0.50		mg/L	5	9/20/2018 11:23:17 AM	R54332
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/20/2018 11:23:17 AM	R54332
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/20/2018 11:23:17 AM	R54332
Sulfate	1500	63	250		mg/L	500	10/10/2018 1:13:44 PM	R54788

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.014	0.00099	0.0020		mg/L	1	10/9/2018 5:25:36 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:25:36 PM	B54767
Calcium	320	0.78	10		mg/L	10	10/9/2018 5:27:52 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:25:36 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 9:51:35 PM	A54839
Iron	0.031	0.016	0.020		mg/L	1	10/9/2018 5:25:36 PM	B54767
Magnesium	96	0.25	1.0		mg/L	1	10/9/2018 5:25:36 PM	B54767
Manganese	0.33	0.00039	0.0020	*	mg/L	1	10/9/2018 5:25:36 PM	B54767
Potassium	0.74	0.11	1.0	J	mg/L	1	10/9/2018 5:25:36 PM	B54767
Silver	0.0079	0.0018	0.0050		mg/L	1	10/9/2018 5:25:36 PM	B54767
Sodium	2300	8.2	50		mg/L	50	10/11/2018 9:53:49 PM	A54839
Zinc	0.0065	0.0021	0.010	J	mg/L	1	10/9/2018 5:25:36 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0041	0.0021	0.0050	J	mg/L	5	9/27/2018 3:20:42 PM	B54472
Lead	ND	0.00087	0.0025		mg/L	5	9/27/2018 3:20:42 PM	B54472
Selenium	ND	0.0038	0.0050		mg/L	5	9/27/2018 3:20:42 PM	B54472
Uranium	0.099	0.00048	0.0025	*	mg/L	5	9/27/2018 3:20:42 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000055	0.000038	0.00020	J	mg/L	1	10/8/2018 4:36:11 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.030	0.0010	0.0020		mg/L	1	10/5/2018 7:47:00 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:47:00 PM	40709
Chromium	0.026	0.0018	0.0060		mg/L	1	10/5/2018 7:47:00 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:47:00 PM	40709
Iron	0.76	0.010	0.020	*	mg/L	1	10/5/2018 7:47:00 PM	40709
Manganese	0.34	0.0011	0.0020	*	mg/L	1	10/5/2018 7:47:00 PM	40709
Silver	0.0073	0.0012	0.0050		mg/L	1	10/5/2018 7:47:00 PM	40709
Zinc	0.0065	0.0033	0.010	J	mg/L	1	10/5/2018 7:47:00 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0056	0.0021	0.0050		mg/L	5	10/2/2018 2:06:59 PM	40709
Lead	ND	0.0011	0.0025		mg/L	5	10/2/2018 2:06:59 PM	40709
Selenium	ND	0.0049	0.0050		mg/L	5	10/2/2018 2:06:59 PM	40709
Uranium	0.091	0.00034	0.0025	*	mg/L	5	10/2/2018 2:06:59 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000060	0.000038	0.00020	J	mg/L	1	10/8/2018 4:38:23 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Acenaphthylene	ND	6.2	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Aniline	ND	6.2	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Anthracene	ND	5.7	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Azobenzene	ND	6.7	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benz(a)anthracene	ND	5.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzo(a)pyrene	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzoic acid	ND	6.3	20		µg/L	1	10/11/2018 2:32:10 PM	40558
Benzyl alcohol	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Carbazole	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Chloroaniline	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Chloronaphthalene	ND	6.1	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Chlorophenol	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Chrysene	ND	6.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Dibenzofuran	ND	6.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Diethyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Dimethyl phthalate	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 12:50:00 PM
Lab ID: 1809B69-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Fluoranthene	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Fluorene	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Hexachlorobenzene	ND	6.2	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Hexachlorobutadiene	ND	6.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Hexachloroethane	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Isophorone	ND	6.2	10		µg/L	1	10/11/2018 2:32:10 PM	40558
1-Methylnaphthalene	ND	7.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Methylnaphthalene	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Methylphenol	ND	6.3	10		µg/L	1	10/11/2018 2:32:10 PM	40558
3+4-Methylphenol	ND	5.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	10/11/2018 2:32:10 PM	40558
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Naphthalene	ND	5.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Nitroaniline	ND	5.9	10		µg/L	1	10/11/2018 2:32:10 PM	40558
3-Nitroaniline	ND	6.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Nitroaniline	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Nitrobenzene	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2-Nitrophenol	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
4-Nitrophenol	ND	5.6	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Pentachlorophenol	ND	5.3	20		µg/L	1	10/11/2018 2:32:10 PM	40558
Phenanthrene	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Phenol	ND	6.0	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Pyrene	ND	6.5	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Pyridine	ND	5.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	10/11/2018 2:32:10 PM	40558
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	10/11/2018 2:32:10 PM	40558
Surr: 2-Fluorophenol	13.6	0	15-74.1	S	%Rec	1	10/11/2018 2:32:10 PM	40558
Surr: Phenol-d5	24.0	0	15-59.8		%Rec	1	10/11/2018 2:32:10 PM	40558
Surr: 2,4,6-Tribromophenol	19.3	0	22.1-112	S	%Rec	1	10/11/2018 2:32:10 PM	40558
Surr: Nitrobenzene-d5	58.6	0	33.2-94		%Rec	1	10/11/2018 2:32:10 PM	40558
Surr: 2-Fluorobiphenyl	60.7	0	34-90.9		%Rec	1	10/11/2018 2:32:10 PM	40558
Surr: 4-Terphenyl-d14	71.1	0	15-149		%Rec	1	10/11/2018 2:32:10 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/21/2018 10:22:45 PM	G54343
Surr: BFB	96.0	0	69.3-150		%Rec	1	9/21/2018 10:22:45 PM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Acetone	ND	0.79	10		µg/L	1	9/24/2018 7:44:38 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 7:44:38 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 7:44:38 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 7:44:38 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 7:44:38 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 7:44:38 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 7:44:38 PM	A54375
Surr: 1,2-Dichloroethane-d4	85.0	0	70-130		%Rec	1	9/24/2018 7:44:38 PM	A54375
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	1	9/24/2018 7:44:38 PM	A54375
Surr: Dibromofluoromethane	84.3	0	70-130		%Rec	1	9/24/2018 7:44:38 PM	A54375
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	9/24/2018 7:44:38 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 7:45:50 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 7:45:50 PM	40496
Surr: DNOP	108	0	76.7-135		%Rec	1	9/21/2018 7:45:50 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.8	0.16	0.50		mg/L	5	9/20/2018 11:48:58 AM	R54332
Chloride	90	3.6	10		mg/L	20	9/20/2018 12:01:50 PM	R54332
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/20/2018 11:48:58 AM	R54332
Bromide	0.28	0.13	0.50	J	mg/L	5	9/20/2018 11:48:58 AM	R54332
Nitrogen, Nitrate (As N)	0.89	0.033	0.50		mg/L	5	9/20/2018 11:48:58 AM	R54332
Phosphorus, Orthophosphate (As P)	ND	1.9	10		mg/L	20	9/20/2018 12:01:50 PM	R54332
Sulfate	1000	4.1	10		mg/L	20	9/20/2018 12:01:50 PM	R54332

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.0075	0.00099	0.0020		mg/L	1	10/9/2018 5:29:59 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:29:59 PM	B54767
Calcium	11	0.078	1.0		mg/L	1	10/9/2018 5:29:59 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:29:59 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 9:55:45 PM	A54839
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 5:29:59 PM	B54767
Magnesium	1.2	0.25	1.0		mg/L	1	10/9/2018 5:29:59 PM	B54767
Manganese	0.018	0.00039	0.0020		mg/L	1	10/9/2018 5:29:59 PM	B54767
Potassium	1.7	0.11	1.0		mg/L	1	10/9/2018 5:29:59 PM	B54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 5:29:59 PM	B54767
Sodium	630	1.6	10		mg/L	10	10/11/2018 9:57:45 PM	A54839
Zinc	0.0098	0.0021	0.010	J	mg/L	1	10/9/2018 5:29:59 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0018	0.00042	0.0010		mg/L	1	9/26/2018 2:34:19 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 2:34:19 PM	C54444
Selenium	0.0025	0.00076	0.0010		mg/L	1	9/26/2018 2:34:19 PM	C54444
Uranium	0.21	0.0019	0.010	*	mg/L	20	9/27/2018 3:23:05 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000055	0.000038	0.00020	J	mg/L	1	10/8/2018 4:40:35 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-11
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018 3:45:00 PM
Lab ID: 1809B69-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.0080	0.0010	0.0020		mg/L	1	10/5/2018 7:51:11 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 7:51:11 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 7:51:11 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 7:51:11 PM	40709
Iron	0.012	0.010	0.020	J	mg/L	1	10/5/2018 7:51:11 PM	40709
Manganese	0.018	0.0011	0.0020		mg/L	1	10/5/2018 7:51:11 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 7:51:11 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 7:51:11 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	10/2/2018 1:15:07 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 1:15:07 PM	40709
Selenium	0.0024	0.00098	0.0010		mg/L	1	10/2/2018 1:15:07 PM	40709
Uranium	0.18	0.00068	0.0050	*	mg/L	10	10/2/2018 2:09:20 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	10/8/2018 4:42:47 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/21/2018 10:46:05 PM	G54343
Surr: BFB	92.4	0	69.3-150		%Rec	1	9/21/2018 10:46:05 PM	G54343
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Acetone	1.7	0.79	10	J	µg/L	1	9/24/2018 8:14:13 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 8:14:13 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 8:14:13 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 8:14:13 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 8:14:13 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 8:14:13 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 8:14:13 PM	A54375
Surr: 1,2-Dichloroethane-d4	88.5	0	70-130		%Rec	1	9/24/2018 8:14:13 PM	A54375
Surr: 4-Bromofluorobenzene	92.9	0	70-130		%Rec	1	9/24/2018 8:14:13 PM	A54375
Surr: Dibromofluoromethane	84.7	0	70-130		%Rec	1	9/24/2018 8:14:13 PM	A54375
Surr: Toluene-d8	96.1	0	70-130		%Rec	1	9/24/2018 8:14:13 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 8:10:16 PM	40496
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 8:10:16 PM	40496
Surr: DNOP	105	0	76.7-135		%Rec	1	9/21/2018 8:10:16 PM	40496

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.3	0.16	0.50		mg/L	5	9/20/2018 12:40:26 PM	R54332
Chloride	38	0.91	2.5		mg/L	5	9/20/2018 12:40:26 PM	R54332
Nitrogen, Nitrite (As N)	ND	0.24	0.50	H	mg/L	5	9/20/2018 12:40:26 PM	R54332
Bromide	0.16	0.13	0.50	J	mg/L	5	9/20/2018 12:40:26 PM	R54332
Nitrogen, Nitrate (As N)	ND	0.033	0.50	H	mg/L	5	9/20/2018 12:40:26 PM	R54332
Phosphorus, Orthophosphate (As P)	0.86	0.46	2.5	JH	mg/L	5	9/20/2018 12:40:26 PM	R54332
Sulfate	320	4.1	10		mg/L	20	9/20/2018 12:53:17 PM	R54332

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.038	0.00099	0.0020		mg/L	1	10/9/2018 5:40:42 PM	B54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 5:40:42 PM	B54767
Calcium	3.6	0.078	1.0		mg/L	1	10/9/2018 5:40:42 PM	B54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 5:40:42 PM	B54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 10:21:22 P	B54839
Iron	0.18	0.016	0.020		mg/L	1	10/9/2018 5:40:42 PM	B54767
Magnesium	0.60	0.25	1.0	J	mg/L	1	10/9/2018 5:40:42 PM	B54767
Manganese	0.022	0.00039	0.0020		mg/L	1	10/9/2018 5:40:42 PM	B54767
Potassium	1.0	0.11	1.0		mg/L	1	10/9/2018 5:40:42 PM	B54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 5:40:42 PM	B54767
Sodium	350	0.82	5.0		mg/L	5	10/11/2018 10:23:19 P	B54839
Zinc	0.0064	0.0021	0.010	J	mg/L	1	10/9/2018 5:40:42 PM	B54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	9/26/2018 2:36:38 PM	C54444
Lead	ND	0.00017	0.00050		mg/L	1	9/26/2018 2:36:38 PM	C54444
Selenium	ND	0.00076	0.0010		mg/L	1	9/26/2018 2:36:38 PM	C54444
Uranium	0.0013	0.000096	0.00050		mg/L	1	9/26/2018 2:36:38 PM	C54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000052	0.000038	0.00020	J	mg/L	1	10/8/2018 4:49:38 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP19
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/18/2018
Lab ID: 1809B69-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.22	0.0010	0.0020		mg/L	1	10/5/2018 8:01:49 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:01:49 PM	40709
Chromium	0.028	0.0018	0.0060		mg/L	1	10/5/2018 8:01:49 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:01:49 PM	40709
Iron	3.6	0.051	0.10	*	mg/L	5	10/5/2018 8:03:33 PM	40709
Manganese	0.16	0.0011	0.0020	*	mg/L	1	10/5/2018 8:01:49 PM	40709
Silver	0.0059	0.0012	0.0050		mg/L	1	10/5/2018 8:01:49 PM	40709
Zinc	0.018	0.0033	0.010		mg/L	1	10/5/2018 8:01:49 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0022	0.0021	0.0050	J	mg/L	5	10/2/2018 1:17:31 PM	40709
Lead	0.0028	0.0011	0.0025		mg/L	5	10/2/2018 1:17:31 PM	40709
Selenium	ND	0.0049	0.0050		mg/L	5	10/2/2018 1:17:31 PM	40709
Uranium	0.0019	0.00034	0.0025	J	mg/L	5	10/2/2018 1:17:31 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000058	0.000038	0.00020	J	mg/L	1	10/8/2018 4:51:52 PM	40868

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809B69-007A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Toluene	ND	0.17	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Naphthalene	ND	0.29	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Acetone	ND	0.79	10		µg/L	1	9/24/2018 8:43:45 PM	A54375
Bromobenzene	ND	0.32	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Bromoform	ND	0.32	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Bromomethane	ND	0.26	3.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
2-Butanone	ND	1.3	10		µg/L	1	9/24/2018 8:43:45 PM	A54375
Carbon disulfide	ND	0.39	10		µg/L	1	9/24/2018 8:43:45 PM	A54375
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Chloroethane	ND	0.16	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Chloroform	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Chloromethane	ND	0.29	3.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Dibromomethane	ND	0.32	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809B69-007A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
2-Hexanone	ND	0.91	10		µg/L	1	9/24/2018 8:43:45 PM	A54375
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/24/2018 8:43:45 PM	A54375
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Styrene	ND	0.25	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/24/2018 8:43:45 PM	A54375
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/24/2018 8:43:45 PM	A54375
Surr: 1,2-Dichloroethane-d4	90.1	0	70-130		%Rec	1	9/24/2018 8:43:45 PM	A54375
Surr: 4-Bromofluorobenzene	99.6	0	70-130		%Rec	1	9/24/2018 8:43:45 PM	A54375
Surr: Dibromofluoromethane	87.6	0	70-130		%Rec	1	9/24/2018 8:43:45 PM	A54375
Surr: Toluene-d8	93.5	0	70-130		%Rec	1	9/24/2018 8:43:45 PM	A54375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0326		0.00500	1	09/28/2018 14:22	WG1172734

Method Blank (MB)

(MB) R3346086-1 09/28/18 13:55

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00130	0.00500

L1028443-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1028443-01 09/28/18 14:16 • (DUP) R3346086-6 09/28/18 14:19

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	0.00610	0.00757	1	22.8	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346086-2 09/28/18 13:56 • (LCSD) R3346086-3 09/28/18 13:57

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.107	0.102	107	102	85.0-115			4.78	20

L1027395-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027395-02 09/28/18 14:07 • (MS) R3346086-4 09/28/18 14:08 • (MSD) R3346086-5 09/28/18 14:09

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0950	0.0932	95.0	93.2	1	75.0-125			1.91	20

L1028127-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1028127-02 09/28/18 14:26 • (MS) R3346086-7 09/28/18 14:27 • (MSD) R3346086-8 09/28/18 14:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.00639	0.111	0.106	105	100	1	75.0-125			4.61	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818467** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	120	50	150			
Cadmium	0.0019	0.0020	0.002000	0	96.0	50	150			J
Calcium	0.48	1.0	0.5000	0	96.0	50	150			J
Chromium	0.0050	0.0060	0.006000	0	84.2	50	150			J
Iron	0.021	0.020	0.02000	0	103	50	150			
Magnesium	0.48	1.0	0.5000	0	96.3	50	150			J
Manganese	0.0020	0.0020	0.002000	0	100	50	150			
Potassium	0.50	1.0	0.5000	0	101	50	150			J
Silver	0.0047	0.0050	0.005000	0	93.6	50	150			J
Zinc	0.0049	0.010	0.005000	0	98.0	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818469** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.2	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.1	85	115			
Iron	0.48	0.020	0.5000	0	95.0	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	51	1.0	50.00	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**LCS-B**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54767**		RunNo:	**54767**					
Prep Date:		Analysis Date:	**10/9/2018**		SeqNo:	**1818469**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	0.099	0.0050	0.1000	0	98.6	85	115				
Zinc	0.47	0.010	0.5000	0	93.6	85	115				

Sample ID	**MB-A**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A54839**		RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**		SeqNo:	**1821800**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	ND	0.0060									
Sodium	ND	1.0									

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A54839**		RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**		SeqNo:	**1821801**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.0072	0.0060	0.006000	0	120	50	150				
Sodium	0.38	1.0	0.5000	0	75.2	50	150				J

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A54839**		RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**		SeqNo:	**1821802**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.48	0.0060	0.5000	0	96.6	85	115				
Sodium	49	1.0	50.00	0	97.3	85	115				

Sample ID	**MB-B**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B54839**		RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**		SeqNo:	**1821889**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	ND	0.0060									
Sodium	0.29	1.0									J

Sample ID	**LLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54839**		RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**		SeqNo:	**1821890**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54839**	RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**	SeqNo:	**1821890**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.0	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54839**	RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**	SeqNo:	**1821891**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Sodium	47	1.0	50.00	0	94.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-40709**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **40709**	RunNo: **54686**
Prep Date: **10/1/2018**	Analysis Date: **10/5/2018**	SeqNo: **1814629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-40709**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **40709**	RunNo: **54686**
Prep Date: **10/1/2018**	Analysis Date: **10/5/2018**	SeqNo: **1814630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Chromium	0.0055	0.0060	0.006000	0	91.0	50	150			J
Copper	0.0032	0.0060	0.006000	0	53.7	50	150			J
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0074	0.010	0.005000	0	148	50	150			J

Sample ID **LCS-40709**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **40709**	RunNo: **54686**
Prep Date: **10/1/2018**	Analysis Date: **10/5/2018**	SeqNo: **1814631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.47	0.020	0.5000	0	93.4	85	115			
Manganese	0.47	0.0020	0.5000	0	95.0	85	115			
Silver	0.096	0.0050	0.1000	0	95.5	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40709**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822962**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Copper	ND	0.0060								
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID	**LLLCS-40709**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822963**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.7	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Zinc	0.0073	0.010	0.005000	0	145	50	150			J

Sample ID	**LCS-40709**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822964**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.5	85	115			
Copper	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.48	0.020	0.5000	0	95.8	85	115			
Zinc	0.48	0.010	0.5000	0	96.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804116** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-C**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804117** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00092	0.0010	0.001000	0	92.2	50	150			J
Lead	0.00045	0.00050	0.0005000	0	89.8	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.1	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.8	50	150			J

Sample ID **MSLCS-C**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804118** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.5	85	115			
Lead	0.011	0.00050	0.01250	0	91.5	85	115			
Selenium	0.023	0.0010	0.02500	0	90.1	85	115			
Uranium	0.011	0.00050	0.01250	0	88.9	85	115			

Sample ID **1809B69-002DLLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB18**	Batch ID: **C54444**	RunNo: **54444**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1804159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.2	70	130			
Lead	0.011	0.00050	0.01250	0	90.0	70	130			
Selenium	0.023	0.0010	0.02500	0	90.9	70	130			
Uranium	0.011	0.00050	0.01250	0	87.8	70	130			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54472**	RunNo: **54472**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54472**	RunNo: **54472**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54472**	RunNo: **54472**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.1	50	150			J
Lead	0.00048	0.00050	0.0005000	0	95.3	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.2	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.3	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54472**	RunNo: **54472**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	95.2	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.011	0.00050	0.01250	0	89.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809799**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.7	50	150			J
Selenium	0.00096	0.0010	0.001000	0	95.9	50	150			J

Sample ID	**MSLCS-40709**	SampType: **LCS**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809800**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			

Sample ID	**MB-40709**	SampType: **MBLK**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809801**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MB-40709**	SampType: **MBLK**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809803**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809804**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MSLCS-40709**	SampType:	**LCS**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**LCSW**	Batch ID:	**40709**		RunNo:	**54582**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809805**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.0	85	115			

Sample ID	**1809B69-001ELLMS**	SampType:	**MSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BW-2C**	Batch ID:	**40709**		RunNo:	**54582**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809813**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0050	0.02500	0	106	70	130			
Lead	0.014	0.0025	0.01250	0.002378	94.8	70	130			
Selenium	0.024	0.0050	0.02500	0	96.5	70	130			
Uranium	0.018	0.0025	0.01250	0.005490	97.0	70	130			

Sample ID	**1809B69-001ELLMS**	SampType:	**MSDLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BW-2C**	Batch ID:	**40709**		RunNo:	**54582**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809814**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0050	0.02500	0	106	70	130	0.145	20	
Lead	0.014	0.0025	0.01250	0.002378	95.4	70	130	0.505	20	
Selenium	0.024	0.0050	0.02500	0	97.5	70	130	1.00	20	
Uranium	0.018	0.0025	0.01250	0.005490	96.2	70	130	0.550	20	

Sample ID	**1809B69-002ELLMS**	SampType:	**MSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**FB18**	Batch ID:	**40709**		RunNo:	**54582**				
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809816**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	70	130			
Lead	0.012	0.00050	0.01250	0	98.2	70	130			
Selenium	0.024	0.0010	0.02500	0	96.7	70	130			
Uranium	0.012	0.00050	0.01250	0	96.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40868**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40868**	RunNo:	**54722**					
Prep Date:	**10/8/2018**	Analysis Date:	**10/8/2018**	SeqNo:	**1815851**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40868**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40868**	RunNo:	**54722**					
Prep Date:	**10/8/2018**	Analysis Date:	**10/8/2018**	SeqNo:	**1815852**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54332**	RunNo: **54332**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1798339** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54332**	RunNo: **54332**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1798340** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.7	0.50	5.000	0	93.6	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.5	90	110			
Bromide	2.4	0.10	2.500	0	95.3	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.7	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.8	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814039** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.17	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814040** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Chloride	4.7	0.50	5.000	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814040** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.8	90	110			
Sulfate	9.3	0.50	10.00	0	93.0	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54788**	RunNo: **54788**
Prep Date:	Analysis Date: **10/10/2018**	SeqNo: **1819249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54788**	RunNo: **54788**
Prep Date:	Analysis Date: **10/10/2018**	SeqNo: **1819250** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.8	90	110			
Sulfate	9.6	0.50	10.00	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **LCS-40496**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40496**	RunNo: **54321**
Prep Date: **9/21/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	70	130			
Surr: DNOP	0.49		0.5000		97.9	76.7	135			

Sample ID **MB-40496**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40496**	RunNo: **54321**
Prep Date: **9/21/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.97		1.000		97.4	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **B30**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54343**	RunNo: **54343**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		96.9	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54343**	RunNo: **54343**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798707** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	103	79.5	127			
Surr: BFB	22		20.00		109	69.3	150			

Sample ID **1809B69-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SMW-2**	Batch ID: **G54343**	RunNo: **54343**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798714** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.80	0.050	0.5000	0.2486	109	52.5	149			
Surr: BFB	290		20.00		1430	69.3	150			S

Sample ID **1809B69-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **SMW-2**	Batch ID: **G54343**	RunNo: **54343**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.78	0.050	0.5000	0.2486	107	52.5	149	1.37	20	
Surr: BFB	280		20.00		1410	69.3	150	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.28	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
1,4-Dioxane	ND	10								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800082** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	83.3	70	130			
Toluene	18	1.0	20.00	0	91.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54375**	RunNo: **54375**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1800082** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	19	1.0	20.00	0	97.4	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	79.0	70	130			
Trichloroethene (TCE)	15	1.0	20.00	0	73.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.4	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.5	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **1809b69-004fms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **SMW-2**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821070** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.4	15	123			
4-Chloro-3-methylphenol	120	10	200.0	0	62.2	26.6	118			
2-Chlorophenol	100	10	200.0	0	52.4	15	120			
1,4-Dichlorobenzene	67	10	100.0	0	67.3	19	108			
2,4-Dinitrotoluene	59	10	100.0	0	59.3	27.8	103			
N-Nitrosodi-n-propylamine	77	10	100.0	0	76.6	32.3	126			
4-Nitrophenol	14	10	200.0	0	7.24	15	72.1			S
Pentachlorophenol	24	20	200.0	0	12.1	15	114			S
Phenol	63	10	200.0	0	31.5	15	67.5			
Pyrene	76	10	100.0	0	76.3	31.2	112			
1,2,4-Trichlorobenzene	75	10	100.0	0	74.9	22.1	123			
Surr: 2-Fluorophenol	63		200.0		31.5	15	74.1			
Surr: Phenol-d5	61		200.0		30.5	15	59.8			
Surr: 2,4,6-Tribromophenol	84		200.0		42.0	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		68.9	33.2	94			
Surr: 2-Fluorobiphenyl	69		100.0		68.6	34	90.9			
Surr: 4-Terphenyl-d14	70		100.0		69.9	15	149			

Sample ID **1809b69-004fmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **SMW-2**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	57	10	100.0	0	57.0	15	123	13.7	30.5	
4-Chloro-3-methylphenol	100	10	200.0	0	50.7	26.6	118	20.3	50	
2-Chlorophenol	100	10	200.0	0	50.4	15	120	3.95	36.3	
1,4-Dichlorobenzene	52	10	100.0	0	52.0	19	108	25.6	42.1	
2,4-Dinitrotoluene	44	10	100.0	0	44.3	27.8	103	28.8	28.5	R
N-Nitrosodi-n-propylamine	62	10	100.0	0	62.3	32.3	126	20.5	25.4	
4-Nitrophenol	21	10	200.0	0	10.6	15	72.1	38.1	50	S
Pentachlorophenol	55	20	200.0	0	27.7	15	114	78.6	50	R
Phenol	59	10	200.0	0	29.6	15	67.5	6.32	46.1	
Pyrene	65	10	100.0	0	64.6	31.2	112	16.6	34.3	
1,2,4-Trichlorobenzene	58	10	100.0	0	57.8	22.1	123	25.9	43.6	
Surr: 2-Fluorophenol	68		200.0		33.8	15	74.1	0	0	
Surr: Phenol-d5	56		200.0		28.1	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.0	22.1	112	0	0	
Surr: Nitrobenzene-d5	57		100.0		57.0	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	62		100.0		62.0	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **1809b69-004fmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **SMW-2**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821071** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	65		100.0		64.6	15	149	0	0	

Sample ID **lcs-40558**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821077** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	66.8	55.1	104			
4-Chloro-3-methylphenol	140	10	200.0	0	72.2	57	115			
2-Chlorophenol	140	10	200.0	0	69.8	43.4	112			
1,4-Dichlorobenzene	67	10	100.0	0	66.6	38	95.2			
2,4-Dinitrotoluene	63	10	100.0	0	63.3	55.1	96.7			
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.4	55	112			
4-Nitrophenol	110	10	200.0	0	53.9	16.6	93			
Pentachlorophenol	120	20	200.0	0	62.2	43.2	104			
Phenol	100	10	200.0	0	52.2	21.3	85.7			
Pyrene	70	10	100.0	0	70.2	64.9	105			
1,2,4-Trichlorobenzene	67	10	100.0	0	67.1	42.6	107			
Surr: 2-Fluorophenol	120		200.0		58.9	15	74.1			
Surr: Phenol-d5	110		200.0		53.2	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		72.5	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		66.7	33.2	94			
Surr: 2-Fluorobiphenyl	67		100.0		67.3	34	90.9			
Surr: 4-Terphenyl-d14	82		100.0		82.2	15	149			

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**	
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809B69**

18-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**	
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	79		200.0		39.6	15	74.1			
Surr: Phenol-d5	61		200.0		30.3	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		66.7	22.1	112			
Surr: Nitrobenzene-d5	58		100.0		57.7	33.2	94			
Surr: 2-Fluorobiphenyl	61		100.0		61.4	34	90.9			
Surr: 4-Terphenyl-d14	68		100.0		68.3	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ANDEAVOR** Work Order Number: **1809B69** RcptNo: **1**

Received By: **Erin Melendrez** **9/20/2018 8:50:00 AM**

Completed By: **Ashley Gallegos** **9/20/2018 10:27:19 AM**

Reviewed By: JAB 09/20/18 Labeled by: JU/TM 9.20.18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 18/1 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JU/TM 9.20.18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			
2	0.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: Cooler 1: 2.2-0.9(CF)= 1.3 Cooler 2: 0.9-0.9(CF)= 0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809B69	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
9/18/18	0850	H_2O	BW-2C	40ml VOA-5	HCl	KD9B69			X							X						
				250 ml Amber-1	Neat	-001			X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier ENH 9/20/18	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ~~X~~ Yes ☐ No

Sample Temperature: Cooler1: 2.2-0.9(CF)=1.3 Cooler2: 0.9-0.9(CF)=0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809B69	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
9/18/18	1010	H_2O	FB18	40ml VOA-5	HCl	-002			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier EMH	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: cooler 1: 2.2-0.9(CF)=1.3 cooler 2: 0.9-0.9(CF)=0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809B109	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/18/18	1115	H_2O	BW-3C	40ml VOA-5	HCl	-003			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier EDH 9/20/18	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: Cooler1: 2.2-0.9(CF)=1.3 Cooler2: 1.9-0.9(CF)=0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/18/18	1250	H_2O	SMW-2	40ml VOA-5	HCl	1809B69-004			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NAOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier EHM 9/20/18	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: Cooler 1; 2.2-0.9(CF)=1.3
Cooler 2 0.9-0.9(CF)=0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809B69	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/18/18	1545	H_2O	OW-11	40ml VOA-5	HCl	-005			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier		
			ENV	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **Annual 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: Cooler1 2.2-0.9=1.3 Cooler2 0.9-0.9=0.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809B69	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/18/18	---	H_2O	DUP#9	40ml VOA-5	HCl	-006			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
9/18/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	-007										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/18	0700		Courier ENH 9/20/18	9/20/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0326		0.00500	1	09/28/2018 14:22	WG1172784

Method Blank (MB)

(MB) R3346086-1 09/28/18 13:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1028443-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1028443-01 09/28/18 14:16 • (DUP) R3346086-6 09/28/18 14:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	0.00610	0.00767	1	22.8	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346086-2 09/28/18 13:56 • (LCSD) R3346086-3 09/28/18 13:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.107	0.102	107	102	85.0-115			4.78	20

L1027395-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027395-02 09/28/18 14:07 • (MS) R3346086-4 09/28/18 14:08 • (MSD) R3346086-5 09/28/18 14:09

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0950	0.0932	95.0	93.2	1	75.0-125			1.91	20

L1028127-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1028127-02 09/28/18 14:26 • (MS) R3346086-7 09/28/18 14:27 • (MSD) R3346086-8 09/28/18 14:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.00605	0.111	0.106	105	100	1	75.0-125			4.61	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 17, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1809C83

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/21/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.8	0.12	0.25		mg/L	5	9/24/2018 2:27:21 PM	W54357
Surr: BFB	90.4	0	69.3-150		%Rec	5	9/24/2018 2:27:21 PM	W54357
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.87	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Toluene	ND	0.84	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Ethylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Methyl tert-butyl ether (MTBE)	2900	16	50		µg/L	50	9/27/2018 2:06:00 PM	R54481
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Naphthalene	ND	1.4	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
1-Methylnaphthalene	ND	1.7	20		µg/L	5	9/27/2018 2:30:00 PM	R54481
2-Methylnaphthalene	ND	1.2	20		µg/L	5	9/27/2018 2:30:00 PM	R54481
Acetone	ND	3.9	50		µg/L	5	9/27/2018 2:30:00 PM	R54481
Bromobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Bromodichloromethane	ND	1.4	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Bromoform	ND	1.6	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Bromomethane	ND	1.3	15		µg/L	5	9/27/2018 2:30:00 PM	R54481
2-Butanone	ND	6.3	50		µg/L	5	9/27/2018 2:30:00 PM	R54481
Carbon disulfide	ND	1.9	50		µg/L	5	9/27/2018 2:30:00 PM	R54481
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Chlorobenzene	ND	1.5	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Chloroethane	ND	0.82	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
Chloroform	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Chloromethane	ND	1.5	15		µg/L	5	9/27/2018 2:30:00 PM	R54481
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
Dibromochloromethane	ND	1.2	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Dibromomethane	ND	1.6	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
2,2-Dichloropropane	ND	0.92	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
2-Hexanone	ND	4.5	50		µg/L	5	9/27/2018 2:30:00 PM	R54481
Isopropylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	9/27/2018 2:30:00 PM	R54481
Methylene Chloride	ND	1.0	15		µg/L	5	9/27/2018 2:30:00 PM	R54481
n-Butylbenzene	ND	1.2	15		µg/L	5	9/27/2018 2:30:00 PM	R54481
n-Propylbenzene	ND	1.2	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
sec-Butylbenzene	1.2	1.0	5.0	J	µg/L	5	9/27/2018 2:30:00 PM	R54481
Styrene	ND	1.3	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	9/27/2018 2:30:00 PM	R54481
Vinyl chloride	ND	0.55	5.0		µg/L	5	9/27/2018 2:30:00 PM	R54481
Xylenes, Total	ND	3.2	7.5		µg/L	5	9/27/2018 2:30:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	5	9/27/2018 2:30:00 PM	R54481
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	5	9/27/2018 2:30:00 PM	R54481
Surr: Dibromofluoromethane	103	0	70-130		%Rec	5	9/27/2018 2:30:00 PM	R54481
Surr: Toluene-d8	99.8	0	70-130		%Rec	5	9/27/2018 2:30:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.6	0.63	1.0		mg/L	1	9/25/2018 9:15:11 PM	40544
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/25/2018 9:15:11 PM	40544
Surr: DNOP	139	0	76.7-135	S	%Rec	1	9/25/2018 9:15:11 PM	40544

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/26/2018 9:43:56 PM	40590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.12	0.0010	0.0020		mg/L	1	10/5/2018 8:05:19 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:05:19 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 8:05:19 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:05:19 PM	40709
Iron	0.067	0.010	0.020		mg/L	1	10/5/2018 8:05:19 PM	40709
Manganese	0.054	0.0011	0.0020	*	mg/L	1	10/5/2018 8:05:19 PM	40709
Silver	0.0015	0.0012	0.0050	J	mg/L	1	10/5/2018 8:05:19 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 8:05:19 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0013	0.00041	0.0010		mg/L	1	10/2/2018 1:24:34 PM	40709
Lead	0.00043	0.00023	0.00050	J	mg/L	1	10/2/2018 1:24:34 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:24:34 PM	40709
Uranium	0.034	0.00034	0.0025	*	mg/L	5	10/2/2018 2:11:41 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000080	0.000038	0.00020	J	mg/L	1	10/11/2018 1:18:04 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-30
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 8:10:00 AM
Lab ID: 1809C83-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.12	0.00099	0.0020		mg/L	1	10/9/2018 6:46:16 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 6:46:16 PM	C54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 6:46:16 PM	C54767
Copper	0.0067	0.0032	0.0060		mg/L	1	10/11/2018 10:38:54 P	B54839
Iron	0.060	0.016	0.020		mg/L	1	10/9/2018 6:46:16 PM	C54767
Manganese	0.051	0.00039	0.0020	*	mg/L	1	10/9/2018 6:46:16 PM	C54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 6:46:16 PM	C54767
Zinc	0.0065	0.0021	0.010	J	mg/L	1	10/9/2018 6:46:16 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	9/27/2018 3:25:28 PM	B54472
Lead	0.00044	0.00017	0.00050	J	mg/L	1	9/27/2018 3:25:28 PM	B54472
Selenium	ND	0.00076	0.0010		mg/L	1	9/27/2018 3:25:28 PM	B54472
Uranium	0.041	0.00048	0.0025	*	mg/L	5	9/27/2018 3:27:50 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000058	0.000038	0.00020	J	mg/L	1	10/11/2018 1:20:19 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 9:45:00 AM
Lab ID: 1809C83-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/24/2018 3:37:16 PM	W54357
Surr: BFB	93.0	0	69.3-150		%Rec	1	9/24/2018 3:37:16 PM	W54357
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Toluene	0.71	0.17	1.0	J	µg/L	1	9/27/2018 2:54:00 PM	R54481
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Methyl tert-butyl ether (MTBE)	0.58	0.32	1.0	J	µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Naphthalene	ND	0.29	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Acetone	4.7	0.79	10	J	µg/L	1	9/27/2018 2:54:00 PM	R54481
Bromobenzene	ND	0.32	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Bromoform	ND	0.32	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Bromomethane	ND	0.26	3.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
2-Butanone	ND	1.3	10		µg/L	1	9/27/2018 2:54:00 PM	R54481
Carbon disulfide	ND	0.39	10		µg/L	1	9/27/2018 2:54:00 PM	R54481
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Chloroethane	ND	0.16	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Chloroform	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Chloromethane	ND	0.29	3.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Dibromomethane	ND	0.32	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 9:45:00 AM
Lab ID: 1809C83-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
2-Hexanone	ND	0.91	10		µg/L	1	9/27/2018 2:54:00 PM	R54481
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/27/2018 2:54:00 PM	R54481
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Styrene	ND	0.25	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/27/2018 2:54:00 PM	R54481
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/27/2018 2:54:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	9/27/2018 2:54:00 PM	R54481
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	9/27/2018 2:54:00 PM	R54481
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/27/2018 2:54:00 PM	R54481
Surr: Toluene-d8	99.9	0	70-130		%Rec	1	9/27/2018 2:54:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 9:45:00 AM
Lab ID: 1809C83-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/26/2018 5:08:54 PM	40544
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/26/2018 5:08:54 PM	40544
Surr: DNOP	143	0	76.7-135	S	%Rec	1	9/26/2018 5:08:54 PM	40544

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 9:45:00 AM
Lab ID: 1809C83-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	ND	0.0010	0.0020		mg/L	1	10/5/2018 8:09:29 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:09:29 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 8:09:29 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:09:29 PM	40709
Iron	ND	0.010	0.020		mg/L	1	10/5/2018 8:09:29 PM	40709
Manganese	ND	0.0011	0.0020		mg/L	1	10/5/2018 8:09:29 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 8:09:29 PM	40709
Zinc	ND	0.0033	0.010		mg/L	1	10/5/2018 8:09:29 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	10/2/2018 1:26:55 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 1:26:55 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:26:55 PM	40709
Uranium	ND	0.000068	0.00050		mg/L	1	10/2/2018 1:26:55 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/11/2018 1:27:07 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB19
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 9:45:00 AM
Lab ID: 1809C83-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/9/2018 6:50:25 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 6:50:25 PM	C54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 6:50:25 PM	C54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 10:41:00 P	B54839
Iron	ND	0.016	0.020		mg/L	1	10/9/2018 6:50:25 PM	C54767
Manganese	ND	0.00039	0.0020		mg/L	1	10/9/2018 6:50:25 PM	C54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 6:50:25 PM	C54767
Zinc	0.0074	0.0021	0.010	J	mg/L	1	10/9/2018 6:50:25 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/27/2018 3:35:00 PM	B54472
Lead	ND	0.00017	0.00050		mg/L	1	9/27/2018 3:35:00 PM	B54472
Selenium	ND	0.00076	0.0010		mg/L	1	9/27/2018 3:35:00 PM	B54472
Uranium	ND	0.000096	0.00050		mg/L	1	9/27/2018 3:35:00 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	10/11/2018 1:29:24 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 12:25:00 PM
Lab ID: 1809C83-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/24/2018 4:00:38 PM	W54357
Surr: BFB	93.6	0	69.3-150		%Rec	1	9/24/2018 4:00:38 PM	W54357
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Toluene	ND	0.17	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Methyl tert-butyl ether (MTBE)	0.51	0.32	1.0	J	µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Naphthalene	ND	0.29	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Acetone	4.2	0.79	10	J	µg/L	1	9/27/2018 3:18:00 PM	R54481
Bromobenzene	ND	0.32	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Bromoform	ND	0.32	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Bromomethane	ND	0.26	3.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
2-Butanone	ND	1.3	10		µg/L	1	9/27/2018 3:18:00 PM	R54481
Carbon disulfide	ND	0.39	10		µg/L	1	9/27/2018 3:18:00 PM	R54481
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Chloroethane	ND	0.16	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Chloroform	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Chloromethane	ND	0.29	3.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Dibromomethane	ND	0.32	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 12:25:00 PM
Lab ID: 1809C83-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
2-Hexanone	ND	0.91	10		µg/L	1	9/27/2018 3:18:00 PM	R54481
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/27/2018 3:18:00 PM	R54481
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Styrene	ND	0.25	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/27/2018 3:18:00 PM	R54481
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/27/2018 3:18:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	9/27/2018 3:18:00 PM	R54481
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	9/27/2018 3:18:00 PM	R54481
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/27/2018 3:18:00 PM	R54481
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	9/27/2018 3:18:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 12:25:00 PM
Lab ID: 1809C83-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/26/2018 5:30:48 PM	40544
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/26/2018 5:30:48 PM	40544
Surr: DNOP	152	0	76.7-135	S	%Rec	1	9/26/2018 5:30:48 PM	40544

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 12:25:00 PM
Lab ID: 1809C83-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.038	0.0010	0.0020		mg/L	1	10/5/2018 8:13:54 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:13:54 PM	40709
Chromium	0.0046	0.0018	0.0060	J	mg/L	1	10/5/2018 8:13:54 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:13:54 PM	40709
Iron	0.43	0.010	0.020	*	mg/L	1	10/5/2018 8:13:54 PM	40709
Manganese	0.018	0.0011	0.0020		mg/L	1	10/5/2018 8:13:54 PM	40709
Silver	ND	0.0012	0.0050		mg/L	1	10/5/2018 8:13:54 PM	40709
Zinc	0.0064	0.0033	0.010	J	mg/L	1	10/5/2018 8:13:54 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	10/2/2018 1:29:16 PM	40709
Lead	0.0010	0.00023	0.00050		mg/L	1	10/2/2018 1:29:16 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:29:16 PM	40709
Uranium	0.011	0.000068	0.00050		mg/L	1	10/2/2018 1:29:16 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000062	0.000038	0.00020	J	mg/L	1	10/11/2018 1:31:41 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 12:25:00 PM
Lab ID: 1809C83-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.021	0.00099	0.0020		mg/L	1	10/9/2018 6:54:52 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 6:54:52 PM	C54767
Chromium	0.0025	0.0013	0.0060	J	mg/L	1	10/9/2018 6:54:52 PM	C54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 10:42:54 P	B54839
Iron	0.069	0.016	0.020		mg/L	1	10/9/2018 6:54:52 PM	C54767
Manganese	0.0040	0.00039	0.0020		mg/L	1	10/9/2018 6:54:52 PM	C54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 6:54:52 PM	C54767
Zinc	0.0081	0.0021	0.010	J	mg/L	1	10/9/2018 6:54:52 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0020	0.00042	0.0010		mg/L	1	9/27/2018 3:39:45 PM	B54472
Lead	ND	0.00017	0.00050		mg/L	1	9/27/2018 3:39:45 PM	B54472
Selenium	ND	0.00076	0.0010		mg/L	1	9/27/2018 3:39:45 PM	B54472
Uranium	0.012	0.000096	0.00050		mg/L	1	9/27/2018 3:39:45 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000038	0.00020	J	mg/L	1	10/11/2018 1:38:36 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Toluene	ND	0.17	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Ethylbenzene	ND	0.22	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2,4-Trimethylbenzene	ND	0.25	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,3,5-Trimethylbenzene	ND	0.23	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	0.23	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Naphthalene	ND	0.29	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1-Methylnaphthalene	ND	0.34	4.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
2-Methylnaphthalene	ND	0.24	4.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Acetone	ND	0.79	10	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Bromobenzene	ND	0.32	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Bromodichloromethane	ND	0.28	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Bromoform	ND	0.32	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Bromomethane	ND	0.26	3.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
2-Butanone	ND	1.3	10	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Carbon disulfide	ND	0.39	10	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Carbon Tetrachloride	ND	0.13	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Chlorobenzene	ND	0.29	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Chloroethane	ND	0.16	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Chloroform	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Chloromethane	ND	0.29	3.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
2-Chlorotoluene	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
4-Chlorotoluene	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
cis-1,2-DCE	ND	0.38	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
cis-1,3-Dichloropropene	ND	0.30	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	0.47	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Dibromochloromethane	ND	0.24	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Dibromomethane	ND	0.32	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2-Dichlorobenzene	ND	0.31	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,3-Dichlorobenzene	ND	0.31	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,4-Dichlorobenzene	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Dichlorodifluoromethane	ND	1.0	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1-Dichloroethane	ND	0.40	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1-Dichloroethene	ND	0.12	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2-Dichloropropane	ND	0.15	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,3-Dichloropropane	ND	0.27	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
2,2-Dichloropropane	ND	0.18	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1-Dichloropropene	ND	0.16	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
2-Hexanone	ND	0.91	10	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Isopropylbenzene	ND	0.22	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
4-Isopropyltoluene	ND	0.24	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
4-Methyl-2-pentanone	ND	0.45	10	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Methylene Chloride	ND	0.21	3.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
n-Butylbenzene	ND	0.25	3.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
n-Propylbenzene	ND	0.24	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
sec-Butylbenzene	ND	0.20	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Styrene	ND	0.25	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
tert-Butylbenzene	ND	0.22	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	0.25	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	0.33	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.15	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
trans-1,2-DCE	ND	0.18	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
trans-1,3-Dichloropropene	ND	0.28	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2,3-Trichlorobenzene	ND	0.28	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2,4-Trichlorobenzene	ND	0.27	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1,1-Trichloroethane	ND	0.15	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,1,2-Trichloroethane	ND	0.23	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Trichloroethene (TCE)	ND	0.26	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Trichlorofluoromethane	ND	0.17	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
1,2,3-Trichloropropane	ND	0.57	2.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Vinyl chloride	ND	0.11	1.0	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Xylenes, Total	ND	0.64	1.5	P	µg/L	1	9/27/2018 3:42:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	102	0	70-130	P	%Rec	1	9/27/2018 3:42:00 PM	R54481
Surr: 4-Bromofluorobenzene	100	0	70-130	P	%Rec	1	9/27/2018 3:42:00 PM	R54481
Surr: Dibromofluoromethane	105	0	70-130	P	%Rec	1	9/27/2018 3:42:00 PM	R54481
Surr: Toluene-d8	99.7	0	70-130	P	%Rec	1	9/27/2018 3:42:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Acenaphthylene	ND	62	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Aniline	ND	62	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Anthracene	ND	57	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Azobenzene	ND	67	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benz(a)anthracene	ND	53	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzo(a)pyrene	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzoic acid	ND	63	200	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Benzyl alcohol	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Carbazole	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Chloroaniline	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Chloronaphthalene	ND	61	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Chlorophenol	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Chrysene	ND	68	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Dibenzofuran	ND	69	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Diethyl phthalate	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Dimethyl phthalate	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Fluoranthene	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Fluorene	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Hexachlorobenzene	ND	62	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Hexachlorobutadiene	ND	64	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Hexachloroethane	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Isophorone	ND	62	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
1-Methylnaphthalene	ND	70	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Methylnaphthalene	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Methylphenol	ND	63	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
3+4-Methylphenol	ND	54	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Naphthalene	ND	50	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Nitroaniline	ND	59	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
3-Nitroaniline	ND	68	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Nitroaniline	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Nitrobenzene	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2-Nitrophenol	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
4-Nitrophenol	ND	56	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Pentachlorophenol	ND	53	200	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Phenanthrene	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Phenol	ND	60	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Pyrene	ND	65	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Pyridine	ND	54	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	10/11/2018 4:00:27 PM	40558
Surr: 2-Fluorophenol	0	0	15-74.1	SD	%Rec	10	10/11/2018 4:00:27 PM	40558
Surr: Phenol-d5	0	0	15-59.8	SD	%Rec	10	10/11/2018 4:00:27 PM	40558
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	SD	%Rec	10	10/11/2018 4:00:27 PM	40558
Surr: Nitrobenzene-d5	0	0	33.2-94	SD	%Rec	10	10/11/2018 4:00:27 PM	40558
Surr: 2-Fluorobiphenyl	0	0	34-90.9	SD	%Rec	10	10/11/2018 4:00:27 PM	40558
Surr: 4-Terphenyl-d14	0	0	15-149	SD	%Rec	10	10/11/2018 4:00:27 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.16	0.50		mg/L	5	9/21/2018 10:19:06 PM	R54349
Chloride	7.9	0.91	2.5		mg/L	5	9/21/2018 10:19:06 PM	R54349
Bromide	ND	0.13	0.50		mg/L	5	9/21/2018 10:19:06 PM	R54349
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/21/2018 10:19:06 PM	R54349
Sulfate	400	4.1	10		mg/L	20	9/21/2018 10:31:58 PM	R54349
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/21/2018 11:36:17 PM	R54349

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.014	0.0010	0.0020		mg/L	1	10/5/2018 8:18:02 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:18:02 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 8:18:02 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:18:02 PM	40709
Iron	0.11	0.010	0.020		mg/L	1	10/5/2018 8:18:02 PM	40709
Manganese	0.0015	0.0011	0.0020	J	mg/L	1	10/5/2018 8:18:02 PM	40709
Silver	0.0036	0.0012	0.0050	J	mg/L	1	10/5/2018 8:18:02 PM	40709
Zinc	0.0047	0.0033	0.010	J	mg/L	1	10/5/2018 8:18:02 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0045	0.00041	0.0010		mg/L	1	10/2/2018 1:31:36 PM	40709
Lead	ND	0.00023	0.00050		mg/L	1	10/2/2018 1:31:36 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:31:36 PM	40709
Uranium	0.0014	0.000068	0.00050		mg/L	1	10/2/2018 1:31:36 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	10/11/2018 1:40:55 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-4
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 1:20:00 PM
Lab ID: 1809C83-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.014	0.00099	0.0020		mg/L	1	10/9/2018 7:05:32 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 7:05:32 PM	C54767
Calcium	170	0.78	10		mg/L	10	10/9/2018 7:07:41 PM	C54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 7:05:32 PM	C54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 10:44:52 P	B54839
Iron	0.085	0.016	0.020		mg/L	1	10/9/2018 7:05:32 PM	C54767
Magnesium	38	0.25	1.0		mg/L	1	10/9/2018 7:05:32 PM	C54767
Manganese	0.00084	0.00039	0.0020	J	mg/L	1	10/9/2018 7:05:32 PM	C54767
Potassium	1.2	0.11	1.0		mg/L	1	10/9/2018 7:05:32 PM	C54767
Silver	0.0039	0.0018	0.0050	J	mg/L	1	10/9/2018 7:05:32 PM	C54767
Sodium	16	0.16	1.0		mg/L	1	10/11/2018 10:44:52 P	B54839
Zinc	0.0083	0.0021	0.010	J	mg/L	1	10/9/2018 7:05:32 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0038	0.00042	0.0010		mg/L	1	9/27/2018 3:44:30 PM	B54472
Lead	ND	0.00017	0.00050		mg/L	1	9/27/2018 3:44:30 PM	B54472
Selenium	0.00099	0.00076	0.0010	J	mg/L	1	9/27/2018 3:44:30 PM	B54472
Uranium	0.0016	0.000096	0.00050		mg/L	1	9/27/2018 3:44:30 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/11/2018 1:43:05 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Toluene	ND	0.17	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Naphthalene	ND	0.29	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Acetone	5.1	0.79	10	J	µg/L	1	9/27/2018 4:06:00 PM	R54481
Bromobenzene	ND	0.32	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Bromoform	ND	0.32	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Bromomethane	ND	0.26	3.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
2-Butanone	ND	1.3	10		µg/L	1	9/27/2018 4:06:00 PM	R54481
Carbon disulfide	ND	0.39	10		µg/L	1	9/27/2018 4:06:00 PM	R54481
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Chloroethane	ND	0.16	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Chloroform	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Chloromethane	ND	0.29	3.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Dibromomethane	ND	0.32	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
2-Hexanone	ND	0.91	10		µg/L	1	9/27/2018 4:06:00 PM	R54481
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/27/2018 4:06:00 PM	R54481
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Styrene	ND	0.25	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/27/2018 4:06:00 PM	R54481
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/27/2018 4:06:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	9/27/2018 4:06:00 PM	R54481
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/27/2018 4:06:00 PM	R54481
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/27/2018 4:06:00 PM	R54481
Surr: Toluene-d8	97.6	0	70-130		%Rec	1	9/27/2018 4:06:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Acenaphthylene	ND	6.2	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Aniline	ND	6.2	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Anthracene	ND	5.7	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Azobenzene	ND	6.7	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benz(a)anthracene	ND	5.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzo(a)pyrene	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzoic acid	ND	6.3	20		µg/L	1	10/11/2018 4:30:00 PM	40558
Benzyl alcohol	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Carbazole	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Chloroaniline	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Chloronaphthalene	ND	6.1	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Chlorophenol	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Chrysene	ND	6.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Dibenzofuran	ND	6.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Diethyl phthalate	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Dimethyl phthalate	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Fluoranthene	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Fluorene	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Hexachlorobenzene	ND	6.2	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Hexachlorobutadiene	ND	6.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Hexachloroethane	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Isophorone	ND	6.2	10		µg/L	1	10/11/2018 4:30:00 PM	40558
1-Methylnaphthalene	ND	7.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Methylnaphthalene	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Methylphenol	ND	6.3	10		µg/L	1	10/11/2018 4:30:00 PM	40558
3+4-Methylphenol	ND	5.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	10/11/2018 4:30:00 PM	40558
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Naphthalene	ND	5.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Nitroaniline	ND	5.9	10		µg/L	1	10/11/2018 4:30:00 PM	40558
3-Nitroaniline	ND	6.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Nitroaniline	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Nitrobenzene	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2-Nitrophenol	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
4-Nitrophenol	ND	5.6	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Pentachlorophenol	ND	5.3	20		µg/L	1	10/11/2018 4:30:00 PM	40558
Phenanthrene	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Phenol	ND	6.0	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Pyrene	ND	6.5	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Pyridine	ND	5.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	10/11/2018 4:30:00 PM	40558
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	10/11/2018 4:30:00 PM	40558
Surr: 2-Fluorophenol	29.2	0	15-74.1		%Rec	1	10/11/2018 4:30:00 PM	40558
Surr: Phenol-d5	22.2	0	15-59.8		%Rec	1	10/11/2018 4:30:00 PM	40558
Surr: 2,4,6-Tribromophenol	56.7	0	22.1-112		%Rec	1	10/11/2018 4:30:00 PM	40558
Surr: Nitrobenzene-d5	45.5	0	33.2-94		%Rec	1	10/11/2018 4:30:00 PM	40558
Surr: 2-Fluorobiphenyl	46.1	0	34-90.9		%Rec	1	10/11/2018 4:30:00 PM	40558
Surr: 4-Terphenyl-d14	52.2	0	15-149		%Rec	1	10/11/2018 4:30:00 PM	40558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.16	0.50		mg/L	5	9/21/2018 11:10:33 PM	R54349
Chloride	33	0.91	2.5		mg/L	5	9/21/2018 11:10:33 PM	R54349
Bromide	ND	0.13	0.50		mg/L	5	9/21/2018 11:10:33 PM	R54349
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/21/2018 11:10:33 PM	R54349
Sulfate	720	4.1	10		mg/L	20	9/21/2018 11:23:25 PM	R54349
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/21/2018 11:49:09 PM	R54349

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.011	0.0010	0.0020		mg/L	1	10/5/2018 8:28:59 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:28:59 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 8:28:59 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:28:59 PM	40709
Iron	0.050	0.010	0.020		mg/L	1	10/5/2018 8:28:59 PM	40709
Manganese	ND	0.0011	0.0020		mg/L	1	10/5/2018 8:28:59 PM	40709
Silver	0.0056	0.0012	0.0050		mg/L	1	10/5/2018 8:28:59 PM	40709
Zinc	0.0057	0.0033	0.010	J	mg/L	1	10/5/2018 8:28:59 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0057	0.00041	0.0010		mg/L	1	10/2/2018 1:34:00 PM	40709
Lead	0.00055	0.00023	0.00050		mg/L	1	10/2/2018 1:34:00 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:34:00 PM	40709
Uranium	0.0014	0.000068	0.00050		mg/L	1	10/2/2018 1:34:00 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/11/2018 1:45:17 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: PW-3
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018 2:10:00 PM
Lab ID: 1809C83-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.011	0.00099	0.0020		mg/L	1	10/9/2018 7:09:54 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 7:09:54 PM	C54767
Calcium	240	0.78	10		mg/L	10	10/9/2018 7:12:07 PM	C54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 7:09:54 PM	C54767
Copper	ND	0.0032	0.0060		mg/L	1	10/11/2018 10:46:56 P	B54839
Iron	0.039	0.016	0.020		mg/L	1	10/9/2018 7:09:54 PM	C54767
Magnesium	47	0.25	1.0		mg/L	1	10/9/2018 7:09:54 PM	C54767
Manganese	0.00095	0.00039	0.0020	J	mg/L	1	10/9/2018 7:09:54 PM	C54767
Potassium	1.5	0.11	1.0		mg/L	1	10/9/2018 7:09:54 PM	C54767
Silver	0.0060	0.0018	0.0050		mg/L	1	10/11/2018 10:46:56 P	B54839
Sodium	62	0.16	1.0		mg/L	1	10/11/2018 10:46:56 P	B54839
Zinc	0.0074	0.0021	0.010	J	mg/L	1	10/9/2018 7:09:54 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0046	0.00042	0.0010		mg/L	1	9/27/2018 3:46:52 PM	B54472
Lead	ND	0.00017	0.00050		mg/L	1	9/27/2018 3:46:52 PM	B54472
Selenium	0.00084	0.00076	0.0010	J	mg/L	1	9/27/2018 3:46:52 PM	B54472
Uranium	0.0016	0.000096	0.00050		mg/L	1	9/27/2018 3:46:52 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	10/11/2018 1:47:28 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	2.9	0.12	0.25		mg/L	5	9/24/2018 4:47:21 PM	W54357
Surr: BFB	94.9	0	69.3-150		%Rec	5	9/24/2018 4:47:21 PM	W54357
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.87	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Toluene	ND	0.84	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Ethylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Methyl tert-butyl ether (MTBE)	2900	16	50		µg/L	50	9/27/2018 4:30:00 PM	R54481
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Naphthalene	ND	1.4	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
1-Methylnaphthalene	ND	1.7	20		µg/L	5	9/27/2018 4:54:00 PM	R54481
2-Methylnaphthalene	ND	1.2	20		µg/L	5	9/27/2018 4:54:00 PM	R54481
Acetone	ND	3.9	50		µg/L	5	9/27/2018 4:54:00 PM	R54481
Bromobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Bromodichloromethane	ND	1.4	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Bromoform	ND	1.6	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Bromomethane	ND	1.3	15		µg/L	5	9/27/2018 4:54:00 PM	R54481
2-Butanone	ND	6.3	50		µg/L	5	9/27/2018 4:54:00 PM	R54481
Carbon disulfide	ND	1.9	50		µg/L	5	9/27/2018 4:54:00 PM	R54481
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Chlorobenzene	ND	1.5	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Chloroethane	ND	0.82	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
Chloroform	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Chloromethane	ND	1.5	15		µg/L	5	9/27/2018 4:54:00 PM	R54481
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
Dibromochloromethane	ND	1.2	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Dibromomethane	ND	1.6	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
2,2-Dichloropropane	ND	0.92	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
2-Hexanone	ND	4.5	50		µg/L	5	9/27/2018 4:54:00 PM	R54481
Isopropylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	9/27/2018 4:54:00 PM	R54481
Methylene Chloride	ND	1.0	15		µg/L	5	9/27/2018 4:54:00 PM	R54481
n-Butylbenzene	ND	1.2	15		µg/L	5	9/27/2018 4:54:00 PM	R54481
n-Propylbenzene	ND	1.2	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
sec-Butylbenzene	1.3	1.0	5.0	J	µg/L	5	9/27/2018 4:54:00 PM	R54481
Styrene	ND	1.3	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	9/27/2018 4:54:00 PM	R54481
Vinyl chloride	ND	0.55	5.0		µg/L	5	9/27/2018 4:54:00 PM	R54481
Xylenes, Total	ND	3.2	7.5		µg/L	5	9/27/2018 4:54:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	5	9/27/2018 4:54:00 PM	R54481
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	5	9/27/2018 4:54:00 PM	R54481
Surr: Dibromofluoromethane	102	0	70-130		%Rec	5	9/27/2018 4:54:00 PM	R54481
Surr: Toluene-d8	100	0	70-130		%Rec	5	9/27/2018 4:54:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.4	0.63	1.0		mg/L	1	9/25/2018 10:21:26 PM	40544
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/25/2018 10:21:26 PM	40544
Surr: DNOP	141	0	76.7-135	S	%Rec	1	9/25/2018 10:21:26 PM	40544

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	9/26/2018 9:58:59 PM	40590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.13	0.0010	0.0020		mg/L	1	10/5/2018 8:33:22 PM	40709
Cadmium	ND	0.00058	0.0020		mg/L	1	10/5/2018 8:33:22 PM	40709
Chromium	ND	0.0018	0.0060		mg/L	1	10/5/2018 8:33:22 PM	40709
Copper	ND	0.0041	0.0060		mg/L	1	10/5/2018 8:33:22 PM	40709
Iron	0.073	0.010	0.020		mg/L	1	10/5/2018 8:33:22 PM	40709
Manganese	0.055	0.0011	0.0020	*	mg/L	1	10/5/2018 8:33:22 PM	40709
Silver	0.0013	0.0012	0.0050	J	mg/L	1	10/5/2018 8:33:22 PM	40709
Zinc	0.0034	0.0033	0.010	J	mg/L	1	10/5/2018 8:33:22 PM	40709
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0013	0.00041	0.0010		mg/L	1	10/2/2018 1:36:21 PM	40709
Lead	0.00044	0.00023	0.00050	J	mg/L	1	10/2/2018 1:36:21 PM	40709
Selenium	ND	0.00098	0.0010		mg/L	1	10/2/2018 1:36:21 PM	40709
Uranium	0.035	0.00034	0.0025	*	mg/L	5	10/2/2018 2:14:02 PM	40709
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000052	0.000038	0.00020	J	mg/L	1	10/11/2018 1:49:41 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP20
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/19/2018
Lab ID: 1809C83-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.12	0.00099	0.0020		mg/L	1	10/9/2018 7:14:19 PM	C54767
Cadmium	ND	0.0010	0.0020		mg/L	1	10/9/2018 7:14:19 PM	C54767
Chromium	ND	0.0013	0.0060		mg/L	1	10/9/2018 7:14:19 PM	C54767
Copper	0.0054	0.0032	0.0060	J	mg/L	1	10/11/2018 10:49:02 P	B54839
Iron	0.059	0.016	0.020		mg/L	1	10/9/2018 7:14:19 PM	C54767
Manganese	0.052	0.00039	0.0020	*	mg/L	1	10/9/2018 7:14:19 PM	C54767
Silver	ND	0.0018	0.0050		mg/L	1	10/9/2018 7:14:19 PM	C54767
Zinc	0.014	0.0021	0.010		mg/L	1	10/9/2018 7:14:19 PM	C54767
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	9/27/2018 3:49:15 PM	B54472
Lead	0.00045	0.00017	0.00050	J	mg/L	1	9/27/2018 3:49:15 PM	B54472
Selenium	ND	0.00076	0.0010		mg/L	1	9/27/2018 3:49:15 PM	B54472
Uranium	0.041	0.00048	0.0025	*	mg/L	5	9/27/2018 3:51:40 PM	B54472
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	10/11/2018 1:51:54 PM	40932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809C83-007A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Toluene	ND	0.17	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Naphthalene	ND	0.29	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Acetone	ND	0.79	10		µg/L	1	9/27/2018 5:18:00 PM	R54481
Bromobenzene	ND	0.32	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Bromoform	ND	0.32	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Bromomethane	ND	0.26	3.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
2-Butanone	ND	1.3	10		µg/L	1	9/27/2018 5:18:00 PM	R54481
Carbon disulfide	ND	0.39	10		µg/L	1	9/27/2018 5:18:00 PM	R54481
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Chloroethane	ND	0.16	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Chloroform	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Chloromethane	ND	0.29	3.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Dibromomethane	ND	0.32	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809C83-007A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
2-Hexanone	ND	0.91	10		µg/L	1	9/27/2018 5:18:00 PM	R54481
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/27/2018 5:18:00 PM	R54481
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Styrene	ND	0.25	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/27/2018 5:18:00 PM	R54481
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/27/2018 5:18:00 PM	R54481
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	9/27/2018 5:18:00 PM	R54481
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	9/27/2018 5:18:00 PM	R54481
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/27/2018 5:18:00 PM	R54481
Surr: Toluene-d8	99.1	0	70-130		%Rec	1	9/27/2018 5:18:00 PM	R54481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	10/01/2018 12:31	WG1172023

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	10/01/2018 12:36	WG1172930

Method Blank (MB)

(MB) R3346533-1 10/01/18 12:23

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1028635-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1028635-01 10/01/18 12:29 • (DUP) R3346533-4 10/01/18 12:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346533-2 10/01/18 12:24 • (LCSD) R3346533-3 10/01/18 12:25

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.103	101	103	85.0-115			1.96	20

L1028683-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1028683-01 10/01/18 12:31 • (MS) R3346533-5 10/01/18 12:32 • (MSD) R3346533-6 10/01/18 12:35

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.108	0.0656	108	65.6	1	75.0-125		J3 J6	48.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818520** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818521** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0026	0.0020	0.002000	0	128	50	150			
Cadmium	0.0020	0.0020	0.002000	0	97.5	50	150			J
Calcium	0.73	1.0	0.5000	0	146	50	150			J
Chromium	0.0051	0.0060	0.006000	0	85.7	50	150			J
Iron	0.025	0.020	0.02000	0	125	50	150			
Magnesium	0.58	1.0	0.5000	0	117	50	150			J
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Potassium	0.52	1.0	0.5000	0	105	50	150			J
Silver	0.0053	0.0050	0.005000	0	106	50	150			
Zinc	0.0055	0.010	0.005000	0	110	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	47	1.0	50.00	0	93.4	85	115			
Chromium	0.50	0.0060	0.5000	0	99.9	85	115			
Iron	0.48	0.020	0.5000	0	96.7	85	115			
Magnesium	48	1.0	50.00	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	47	1.0	50.00	0	94.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C54767**	RunNo:	**54767**					
Prep Date:		Analysis Date:	**10/9/2018**	SeqNo:	**1818522**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.47	0.010	0.5000	0	94.5	85	115			

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B54839**	RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**	SeqNo:	**1821889**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Silver	ND	0.0050								
Sodium	0.29	1.0								J

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54839**	RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**	SeqNo:	**1821890**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.0	50	150			J
Silver	0.0050	0.0050	0.005000	0	99.0	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54839**	RunNo:	**54839**					
Prep Date:		Analysis Date:	**10/11/2018**	SeqNo:	**1821891**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Silver	0.090	0.0050	0.1000	0	89.9	85	115			
Sodium	47	1.0	50.00	0	94.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40709**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40709**	RunNo:	**54686**
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40709**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40709**	RunNo:	**54686**
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Cadmium	0.0021	0.0020	0.002000	0	107	50	150			
Chromium	0.0055	0.0060	0.006000	0	91.0	50	150			J
Copper	0.0032	0.0060	0.006000	0	53.7	50	150			J
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Silver	0.0051	0.0050	0.005000	0	101	50	150			
Zinc	0.0074	0.010	0.005000	0	148	50	150			J

Sample ID	**LCS-40709**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54686**
Prep Date:	**10/1/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.3	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Chromium	0.47	0.0060	0.5000	0	94.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.6	85	115			
Iron	0.47	0.020	0.5000	0	93.4	85	115			
Manganese	0.47	0.0020	0.5000	0	95.0	85	115			
Silver	0.096	0.0050	0.1000	0	95.5	85	115			
Zinc	0.49	0.010	0.5000	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40709**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822962**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Copper	ND	0.0060								
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID	**LLLCS-40709**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822963**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Copper	0.0054	0.0060	0.006000	0	90.7	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Zinc	0.0073	0.010	0.005000	0	145	50	150			J

Sample ID	**LCS-40709**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54856**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/12/2018**	SeqNo:	**1822964**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.5	85	115			
Copper	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.48	0.020	0.5000	0	95.8	85	115			
Zinc	0.48	0.010	0.5000	0	96.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B54472**	RunNo:	**54472**					
Prep Date:		Analysis Date:	**9/27/2018**	SeqNo:	**1805621**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54472**	RunNo:	**54472**					
Prep Date:		Analysis Date:	**9/27/2018**	SeqNo:	**1805622**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.1	50	150			J
Lead	0.00048	0.00050	0.0005000	0	95.3	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.2	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.3	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54472**	RunNo:	**54472**					
Prep Date:		Analysis Date:	**9/27/2018**	SeqNo:	**1805623**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.9	85	115			
Lead	0.012	0.00050	0.01250	0	95.2	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.011	0.00050	0.01250	0	89.4	85	115			

Sample ID	**1809C83-002DMSLL**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**FB19**	Batch ID:	**B54472**	RunNo:	**54472**					
Prep Date:		Analysis Date:	**9/27/2018**	SeqNo:	**1805641**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.7	70	130			
Lead	0.012	0.00050	0.01250	0	96.5	70	130			
Selenium	0.024	0.0010	0.02500	0	97.6	70	130			
Uranium	0.013	0.00050	0.01250	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809799**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.1	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.7	50	150			J
Selenium	0.00096	0.0010	0.001000	0	95.9	50	150			J

Sample ID	**MSLCS-40709**	SampType: **LCS**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809800**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			

Sample ID	**MB-40709**	SampType: **MBLK**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809801**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MB-40709**	SampType: **MBLK**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809803**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40709**	SampType: **LCSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40709**			RunNo: **54582**					
Prep Date:	**10/1/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809804**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLCS-40709**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40709**	RunNo:	**54582**					
Prep Date:	**10/1/2018**	Analysis Date:	**10/2/2018**	SeqNo:	**1809805**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**
17-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40932**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40932**	RunNo:	**54811**					
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820342**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40932**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40932**	RunNo:	**54811**					
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820343**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.2	80	120			

Sample ID	**1809C83-001EMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-30**	Batch ID:	**40932**	RunNo:	**54811**					
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820346**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	.00005814	90.7	75	125			

Sample ID	**1809C83-001EMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-30**	Batch ID:	**40932**	RunNo:	**54811**					
Prep Date:	**10/10/2018**	Analysis Date:	**10/11/2018**	SeqNo:	**1820347**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	.00005814	95.8	75	125	5.39	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54349**	RunNo: **54349**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1799035** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.20	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54349**	RunNo: **54349**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1799036** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.2	90	110			
Chloride	4.7	0.50	5.000	0	94.4	90	110			
Bromide	2.4	0.10	2.500	0	96.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	94.4	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40590**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805017**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40590**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40590**	RunNo:	**54457**					
Prep Date:	**9/26/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1805019**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.1000	0	105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-40544**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40544**	RunNo: **54386**
Prep Date: **9/24/2018**	Analysis Date: **9/25/2018**	SeqNo: **1802127** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	119	70	130			
Surr: DNOP	0.51		0.5000		102	76.7	135			

Sample ID **MB-40544**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40544**	RunNo: **54386**
Prep Date: **9/24/2018**	Analysis Date: **9/25/2018**	SeqNo: **1802128** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		115	76.7	135			

Sample ID **LCS-40629**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40629**	RunNo: **54465**
Prep Date: **9/27/2018**	Analysis Date: **9/27/2018**	SeqNo: **1807089** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.60		0.5000		120	76.7	135			

Sample ID **MB-40629**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40629**	RunNo: **54465**
Prep Date: **9/27/2018**	Analysis Date: **9/27/2018**	SeqNo: **1807090** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1.2		1.000		125	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W54357**	RunNo: **54357**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.7	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W54357**	RunNo: **54357**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801716** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	103	79.5	127			
Surr: BFB	23		20.00		115	69.3	150			

Sample ID **1809C83-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-30**	Batch ID: **W54357**	RunNo: **54357**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.9	0.25	2.500	2.808	122	52.5	149			
Surr: BFB	100		100.0		105	69.3	150			

Sample ID **1809C83-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-30**	Batch ID: **W54357**	RunNo: **54357**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	6.0	0.25	2.500	2.808	126	52.5	149	1.57	20	
Surr: BFB	110		100.0		107	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805919** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	97.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		99.4	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805928** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805928** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**

17-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805928** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **1809c83-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805962** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	100	5.0	100.0	0	101	60.5	137			
Toluene	97	5.0	100.0	0	97.0	70	130			
Chlorobenzene	98	5.0	100.0	0	98.4	70	130			
1,1-Dichloroethene	110	5.0	100.0	0	107	70	130			
Trichloroethene (TCE)	95	5.0	100.0	0	94.5	70	130			
Surr: 1,2-Dichloroethane-d4	51		50.00		103	70	130			
Surr: 4-Bromofluorobenzene	52		50.00		104	70	130			
Surr: Dibromofluoromethane	52		50.00		105	70	130			
Surr: Toluene-d8	50		50.00		99.5	70	130			

Sample ID **1809c83-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-30**	Batch ID: **R54481**	RunNo: **54481**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805963** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	96	5.0	100.0	0	96.1	60.5	137	5.09	20	
Toluene	93	5.0	100.0	0	93.2	70	130	3.93	20	
Chlorobenzene	95	5.0	100.0	0	95.1	70	130	3.44	20	
1,1-Dichloroethene	100	5.0	100.0	0	99.9	70	130	6.79	20	
Trichloroethene (TCE)	89	5.0	100.0	0	88.6	70	130	6.51	20	
Surr: 1,2-Dichloroethane-d4	52		50.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	53		50.00		106	70	130	0	0	
Surr: Dibromofluoromethane	52		50.00		104	70	130	0	0	
Surr: Toluene-d8	51		50.00		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**
17-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40558**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821077** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	66.8	55.1	104			
4-Chloro-3-methylphenol	140	10	200.0	0	72.2	57	115			
2-Chlorophenol	140	10	200.0	0	69.8	43.4	112			
1,4-Dichlorobenzene	67	10	100.0	0	66.6	38	95.2			
2,4-Dinitrotoluene	63	10	100.0	0	63.3	55.1	96.7			
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.4	55	112			
4-Nitrophenol	110	10	200.0	0	53.9	16.6	93			
Pentachlorophenol	120	20	200.0	0	62.2	43.2	104			
Phenol	100	10	200.0	0	52.2	21.3	85.7			
Pyrene	70	10	100.0	0	70.2	64.9	105			
1,2,4-Trichlorobenzene	67	10	100.0	0	67.1	42.6	107			
Surr: 2-Fluorophenol	120		200.0		58.9	15	74.1			
Surr: Phenol-d5	110		200.0		53.2	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		72.5	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		66.7	33.2	94			
Surr: 2-Fluorobiphenyl	67		100.0		67.3	34	90.9			
Surr: 4-Terphenyl-d14	82		100.0		82.2	15	149			

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**
17-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**	
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809C83**
17-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40558**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40558**	RunNo: **54827**
Prep Date: **9/25/2018**	Analysis Date: **10/11/2018**	SeqNo: **1821080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	79		200.0		39.6	15	74.1			
Surr: Phenol-d5	61		200.0		30.3	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		66.7	22.1	112			
Surr: Nitrobenzene-d5	58		100.0		57.7	33.2	94			
Surr: 2-Fluorobiphenyl	61		100.0		61.4	34	90.9			
Surr: 4-Terphenyl-d14	68		100.0		68.3	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ANDEAVOR** Work Order Number: **1809C83** RcptNo: **1**

Received By: **Jazzmine Burkhead** **9/21/2018 8:55:00 AM**

Completed By: **Erin Melendrez** **9/21/2018 9:53:17 AM**

Reviewed By: ENM 9/21/18
LB; JAB 09/21/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 12;2
(<2 or >12 unless noted)
Adjusted? No
Checked by: JAB 09/21/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: For metals analysis: Added approx. 0.5 mL HNO3 to 005E container 1 of 1 for preferred pH. Held for 24 hours prior to analysis.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			
2	2.8	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C83	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
9/19/18	0810	H_2O	OW-30	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Brianna Burkhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Courier Cooler #1 - 3.1 Cooler #2 - 2.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/19/18	0945	H_2O	FB19	40 ML VOA-5	HCl	1809C83-002			X							X						
				250 ML AMBER-1	NEAT				X													
				250 ML PLASTIC-1	HNO_3													X				
				125 ML PLASTIC-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Brandi Buckhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ~~ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE~~

Courier Cooler #1 - 3.1

Cooler #2 - 2.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C83	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	**WQCC Metals(Total & Dissolved)**				Air Bubbles (Y or N)
9/19/18	12:25	H_2O	OW-12	40ml VOA-5	HCl	-003			X							X						
↓	↓	↓	↓	250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Brenni Buckhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Courier Cooler #1 - 3.1

Cooler #2 - 2.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C83	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	**8260B**	**8270 (Semi-VOA)**	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***	**Cyanide**		Air Bubbles (Y or N)
9/19/18	1320	H_2O	PW-4	40ml VOA-3	HCl	-004										X						
				1 Liter Amber -2	Neat												X					
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NaOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Brittney Buckhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 - 3.1

Cooler #2 - 2.8

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C83	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Cyanide		Air Bubbles (Y or N)
9/19/18	1410	H_2O	PW-3	40ml VOA-3	HCl	-005										X						
				1 Liter Amber -1	Neat												X					
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NaOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Brittney Buckhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier Cooler #1 - 3.1

Cooler #2 - 2.8

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C83	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/19/18	—	H_2O	DUP20	40 ML VOA-5	HCl	-006			X							X						
				40 ML VOA-3	$NA_2S_2O_3$						X											
				250 ML AMBER-1	NEAT				X													
				250 ML PLASTIC-1	HNO_3													X				
				125 ML PLASTIC-1	HNO_3													X				
9/19/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	-007										X						

Date	Time	Relinquished by:	Received by:	Date	Time
9/20/18	0700		Jennifer Burkhead	09/21/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: ~~* ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE~~
Courier Cooler #1 - 3.1
Cooler #2 - 2.8

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J3 J6	0.00500	1	10/01/2018 12:31	WG1173093

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	10/01/2018 12:36	WG1173093

Method Blank (MB)

(MB) R3346533-1 10/01/18 12:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1028635-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1028635-01 10/01/18 12:29 • (DUP) R3346533-4 10/01/18 12:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346533-2 10/01/18 12:24 • (LCSD) R3346533-3 10/01/18 12:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.103	101	103	85.0-115			1.96	20

L1028683-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1028683-01 10/01/18 12:31 • (MS) R3346533-5 10/01/18 12:32 • (MSD) R3346533-6 10/01/18 12:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.108	0.0656	108	65.6	1	75.0-125		J3 J6	48.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1809227

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/11/2018 1:53:07 PM	AN5406
Surr: BFB	93.3	0	69.3-150		%Rec	1	9/11/2018 1:53:07 PM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Toluene	ND	0.17	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Naphthalene	ND	0.29	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Acetone	2.3	0.79	10	J	µg/L	1	9/12/2018 3:12:38 PM	W54111
Bromobenzene	ND	0.32	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Bromoform	ND	0.32	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Bromomethane	ND	0.26	3.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
2-Butanone	ND	1.3	10		µg/L	1	9/12/2018 3:12:38 PM	W54111
Carbon disulfide	ND	0.39	10		µg/L	1	9/12/2018 3:12:38 PM	W54111
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Chloroethane	ND	0.16	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Chloroform	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Chloromethane	ND	0.29	3.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Dibromomethane	ND	0.32	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
2-Hexanone	ND	0.91	10		µg/L	1	9/12/2018 3:12:38 PM	W54111
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/12/2018 3:12:38 PM	W54111
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Styrene	ND	0.25	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/12/2018 3:12:38 PM	W54111
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/12/2018 3:12:38 PM	W54111
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	1	9/12/2018 3:12:38 PM	W54111
Surr: 4-Bromofluorobenzene	92.4	0	70-130		%Rec	1	9/12/2018 3:12:38 PM	W54111
Surr: Dibromofluoromethane	94.6	0	70-130		%Rec	1	9/12/2018 3:12:38 PM	W54111
Surr: Toluene-d8	92.1	0	70-130		%Rec	1	9/12/2018 3:12:38 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/10/2018 6:37:41 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 6:37:41 PM	40234
Surr: DNOP	102	0	76.7-135		%Rec	1	9/10/2018 6:37:41 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/10/2018 10:56:09 PM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Benzoic acid	7.8	6.3	20	J	µg/L	1	9/13/2018 3:59:30 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Carbazole	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 3:59:30 PM	40263
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 3:59:30 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 3:59:30 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Naphthalene	ND	5.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 3:59:30 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 3:59:30 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Phenol	ND	6.0	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 3:59:30 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 3:59:30 PM	40263
Surr: 2-Fluorophenol	40.8	0	15-74.1		%Rec	1	9/13/2018 3:59:30 PM	40263
Surr: Phenol-d5	35.5	0	15-59.8		%Rec	1	9/13/2018 3:59:30 PM	40263
Surr: 2,4,6-Tribromophenol	73.5	0	22.1-112		%Rec	1	9/13/2018 3:59:30 PM	40263
Surr: Nitrobenzene-d5	66.6	0	33.2-94		%Rec	1	9/13/2018 3:59:30 PM	40263
Surr: 2-Fluorobiphenyl	66.4	0	34-90.9		%Rec	1	9/13/2018 3:59:30 PM	40263
Surr: 4-Terphenyl-d14	102	0	15-149		%Rec	1	9/13/2018 3:59:30 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	9/6/2018 11:09:48 AM	R53995
Chloride	ND	0.029	0.50		mg/L	1	9/6/2018 11:09:48 AM	R53995
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	9/6/2018 11:09:48 AM	R53995
Bromide	ND	0.027	0.10		mg/L	1	9/6/2018 11:09:48 AM	R53995
Nitrogen, Nitrate (As N)	0.023	0.0066	0.10	J	mg/L	1	9/6/2018 11:09:48 AM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	9/6/2018 11:09:48 AM	R53995
Sulfate	ND	0.21	0.50		mg/L	1	9/6/2018 11:09:48 AM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 10:15:44 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:05:23 PM	A54547
Calcium	ND	0.078	1.0		mg/L	1	9/25/2018 10:15:44 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:15:44 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:15:44 PM	B54392
Iron	ND	0.016	0.020		mg/L	1	9/25/2018 10:15:44 PM	B54392
Magnesium	ND	0.25	1.0		mg/L	1	9/25/2018 10:15:44 PM	B54392
Manganese	ND	0.00039	0.0020		mg/L	1	9/25/2018 10:15:44 PM	B54392
Potassium	0.19	0.11	1.0	J	mg/L	1	9/25/2018 10:15:44 PM	B54392
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 12:05:23 PM	A54547
Sodium	ND	0.16	1.0		mg/L	1	9/25/2018 10:15:44 PM	B54392
Zinc	0.0052	0.0021	0.010	J	mg/L	1	9/25/2018 10:15:44 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/21/2018 1:19:09 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:19:09 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:19:09 PM	B54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 1:19:09 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 11:55:00 AM
Lab ID: 1809227-001G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 9:18:53 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:18:53 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:18:53 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:18:53 PM	40258
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 9:18:53 PM	40258
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 9:18:53 PM	40258
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 9:18:53 PM	40258
Zinc	0.0035	0.0033	0.010	J	mg/L	1	9/13/2018 9:18:53 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/12/2018 5:50:13 PM	40258
Lead	ND	0.00023	0.00050		mg/L	1	9/12/2018 5:50:13 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:50:13 PM	40258
Uranium	ND	0.000068	0.00050		mg/L	1	9/12/2018 5:50:13 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 3:46:50 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/11/2018 2:16:33 PM	AN5406
Surr: BFB	96.3	0	69.3-150		%Rec	1	9/11/2018 2:16:33 PM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Toluene	ND	0.17	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Naphthalene	ND	0.29	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Acetone	1.7	0.79	10	J	µg/L	1	9/12/2018 3:42:11 PM	W54111
Bromobenzene	ND	0.32	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Bromoform	ND	0.32	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Bromomethane	ND	0.26	3.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
2-Butanone	ND	1.3	10		µg/L	1	9/12/2018 3:42:11 PM	W54111
Carbon disulfide	ND	0.39	10		µg/L	1	9/12/2018 3:42:11 PM	W54111
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Chloroethane	ND	0.16	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Chloroform	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Chloromethane	ND	0.29	3.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Dibromomethane	ND	0.32	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
2-Hexanone	ND	0.91	10		µg/L	1	9/12/2018 3:42:11 PM	W54111
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/12/2018 3:42:11 PM	W54111
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Styrene	ND	0.25	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/12/2018 3:42:11 PM	W54111
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/12/2018 3:42:11 PM	W54111
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	1	9/12/2018 3:42:11 PM	W54111
Surr: 4-Bromofluorobenzene	92.5	0	70-130		%Rec	1	9/12/2018 3:42:11 PM	W54111
Surr: Dibromofluoromethane	91.1	0	70-130		%Rec	1	9/12/2018 3:42:11 PM	W54111
Surr: Toluene-d8	89.6	0	70-130		%Rec	1	9/12/2018 3:42:11 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/10/2018 7:51:28 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 7:51:28 PM	40234
Surr: DNOP	104	0	76.7-135		%Rec	1	9/10/2018 7:51:28 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/10/2018 11:56:44 PM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Benzoic acid	7.9	6.3	20	J	µg/L	1	9/13/2018 4:29:02 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Carbazole	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 4:29:02 PM	40263
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 4:29:02 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 4:29:02 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Naphthalene	ND	5.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 4:29:02 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 4:29:02 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Phenol	ND	6.0	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 4:29:02 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 4:29:02 PM	40263
Surr: 2-Fluorophenol	29.3	0	15-74.1		%Rec	1	9/13/2018 4:29:02 PM	40263
Surr: Phenol-d5	27.0	0	15-59.8		%Rec	1	9/13/2018 4:29:02 PM	40263
Surr: 2,4,6-Tribromophenol	63.0	0	22.1-112		%Rec	1	9/13/2018 4:29:02 PM	40263
Surr: Nitrobenzene-d5	45.3	0	33.2-94		%Rec	1	9/13/2018 4:29:02 PM	40263
Surr: 2-Fluorobiphenyl	54.0	0	34-90.9		%Rec	1	9/13/2018 4:29:02 PM	40263
Surr: 4-Terphenyl-d14	83.0	0	15-149		%Rec	1	9/13/2018 4:29:02 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.030	0.10		mg/L	1	9/6/2018 12:01:15 PM	R53995
Chloride	0.20	0.029	0.50	J	mg/L	1	9/6/2018 12:01:15 PM	R53995
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	9/6/2018 12:01:15 PM	R53995
Bromide	ND	0.027	0.10		mg/L	1	9/6/2018 12:01:15 PM	R53995
Nitrogen, Nitrate (As N)	0.016	0.0066	0.10	J	mg/L	1	9/6/2018 12:01:15 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	9/6/2018 12:01:15 PM	R53995
Sulfate	ND	0.21	0.50		mg/L	1	9/6/2018 12:01:15 PM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	9/25/2018 10:28:05 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:07:37 PM	A54547
Calcium	ND	0.078	1.0		mg/L	1	9/25/2018 10:28:05 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:28:05 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:28:05 PM	B54392
Iron	ND	0.016	0.020		mg/L	1	9/25/2018 10:28:05 PM	B54392
Magnesium	ND	0.25	1.0		mg/L	1	9/25/2018 10:28:05 PM	B54392
Manganese	ND	0.00039	0.0020		mg/L	1	9/25/2018 10:28:05 PM	B54392
Potassium	ND	0.11	1.0		mg/L	1	9/25/2018 10:28:05 PM	B54392
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 12:07:37 PM	A54547
Sodium	ND	0.16	1.0		mg/L	1	9/25/2018 10:28:05 PM	B54392
Zinc	0.0057	0.0021	0.010	J	mg/L	1	9/25/2018 10:28:05 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/21/2018 1:26:16 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:26:16 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:26:16 PM	B54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 1:26:16 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:15:00 PM
Lab ID: 1809227-002G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/13/2018 9:31:49 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:31:49 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:31:49 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:31:49 PM	40258
Iron	ND	0.010	0.020		mg/L	1	9/13/2018 9:31:49 PM	40258
Manganese	ND	0.0011	0.0020		mg/L	1	9/13/2018 9:31:49 PM	40258
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 9:31:49 PM	40258
Zinc	0.0074	0.0033	0.010	J	mg/L	1	9/13/2018 9:31:49 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/12/2018 5:52:31 PM	40258
Lead	ND	0.00023	0.00050		mg/L	1	9/12/2018 5:52:31 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:52:31 PM	40258
Uranium	ND	0.000068	0.00050		mg/L	1	9/12/2018 5:52:31 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 3:53:31 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	12	0.49	1.0		mg/L	20	9/11/2018 2:39:59 PM	AN5406
Surr: BFB	113	0	69.3-150		%Rec	20	9/11/2018 2:39:59 PM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1100	17	100		µg/L	100	9/12/2018 4:11:42 PM	W54111
Toluene	14	1.7	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Ethylbenzene	700	2.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Methyl tert-butyl ether (MTBE)	1800	3.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2,4-Trimethylbenzene	480	2.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,3,5-Trimethylbenzene	93	2.3	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2-Dichloroethane (EDC)	4.3	4.0	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Naphthalene	360	2.9	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
1-Methylnaphthalene	190	3.4	40		µg/L	10	9/12/2018 4:41:17 PM	W54111
2-Methylnaphthalene	200	2.4	40		µg/L	10	9/12/2018 4:41:17 PM	W54111
Acetone	49	7.9	100	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
Bromobenzene	ND	3.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Bromodichloromethane	ND	2.8	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Bromoform	ND	3.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Bromomethane	ND	2.6	30		µg/L	10	9/12/2018 4:41:17 PM	W54111
2-Butanone	ND	13	100		µg/L	10	9/12/2018 4:41:17 PM	W54111
Carbon disulfide	ND	3.9	100		µg/L	10	9/12/2018 4:41:17 PM	W54111
Carbon Tetrachloride	ND	1.3	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Chlorobenzene	ND	2.9	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Chloroethane	ND	1.6	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
Chloroform	ND	4.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Chloromethane	ND	2.9	30		µg/L	10	9/12/2018 4:41:17 PM	W54111
2-Chlorotoluene	ND	4.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
4-Chlorotoluene	ND	4.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
cis-1,2-DCE	8.0	3.8	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
Dibromochloromethane	ND	2.4	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Dibromomethane	ND	3.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Dichlorodifluoromethane	ND	10	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1-Dichloroethane	7.4	4.0	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1-Dichloroethene	7.7	1.2	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2-Dichloropropane	ND	1.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	2.7	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
2,2-Dichloropropane	ND	1.8	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1-Dichloropropene	ND	1.6	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Hexachlorobutadiene	ND	8.0	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
2-Hexanone	ND	9.1	100		µg/L	10	9/12/2018 4:41:17 PM	W54111
Isopropylbenzene	27	2.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
4-Isopropyltoluene	4.0	2.4	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	9/12/2018 4:41:17 PM	W54111
Methylene Chloride	ND	2.1	30		µg/L	10	9/12/2018 4:41:17 PM	W54111
n-Butylbenzene	11	2.5	30	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
n-Propylbenzene	68	2.4	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
sec-Butylbenzene	4.8	2.0	10	J	µg/L	10	9/12/2018 4:41:17 PM	W54111
Styrene	ND	2.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
tert-Butylbenzene	ND	2.2	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
trans-1,2-DCE	ND	1.8	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1,1-Trichloroethane	ND	1.5	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Trichlorofluoromethane	ND	1.7	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	9/12/2018 4:41:17 PM	W54111
Vinyl chloride	ND	1.1	10		µg/L	10	9/12/2018 4:41:17 PM	W54111
Xylenes, Total	860	6.4	15		µg/L	10	9/12/2018 4:41:17 PM	W54111
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	10	9/12/2018 4:41:17 PM	W54111
Surr: 4-Bromofluorobenzene	95.7	0	70-130		%Rec	10	9/12/2018 4:41:17 PM	W54111
Surr: Dibromofluoromethane	93.2	0	70-130		%Rec	10	9/12/2018 4:41:17 PM	W54111
Surr: Toluene-d8	100	0	70-130		%Rec	10	9/12/2018 4:41:17 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	4.7	0.63	1.0		mg/L	1	9/10/2018 8:16:07 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 8:16:07 PM	40234
Surr: DNOP	108	0	76.7-135		%Rec	1	9/10/2018 8:16:07 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/11/2018 12:11:51 AM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 4:58:25 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Carbazole	19	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4-Dimethylphenol	7.1	5.9	10	J	µg/L	1	9/13/2018 4:58:25 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 4:58:25 PM	40263
1-Methylnaphthalene	130	7.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2-Methylnaphthalene	160	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 4:58:25 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 4:58:25 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Naphthalene	240	10	20		µg/L	2	9/18/2018 4:39:18 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 4:58:25 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 4:58:25 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Phenol	ND	6.0	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 4:58:25 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 4:58:25 PM	40263
Surr: 2-Fluorophenol	27.1	0	15-74.1		%Rec	1	9/13/2018 4:58:25 PM	40263
Surr: Phenol-d5	39.2	0	15-59.8		%Rec	1	9/13/2018 4:58:25 PM	40263
Surr: 2,4,6-Tribromophenol	80.2	0	22.1-112		%Rec	1	9/13/2018 4:58:25 PM	40263
Surr: Nitrobenzene-d5	80.1	0	33.2-94		%Rec	1	9/13/2018 4:58:25 PM	40263
Surr: 2-Fluorobiphenyl	79.7	0	34-90.9		%Rec	1	9/13/2018 4:58:25 PM	40263
Surr: 4-Terphenyl-d14	105	0	15-149		%Rec	1	9/13/2018 4:58:25 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.0	0.15	0.50		mg/L	5	9/6/2018 12:26:58 PM	R53995
Chloride	200	0.59	10		mg/L	20	9/6/2018 12:39:50 PM	R53995
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/6/2018 12:26:58 PM	R53995
Bromide	2.4	0.13	0.50		mg/L	5	9/6/2018 12:26:58 PM	R53995
Nitrogen, Nitrate (As N)	0.083	0.033	0.50	J	mg/L	5	9/6/2018 12:26:58 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/6/2018 12:26:58 PM	R53995
Sulfate	5.5	1.0	2.5		mg/L	5	9/6/2018 12:26:58 PM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.1	0.0099	0.020	*	mg/L	10	9/25/2018 10:34:21 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:09:50 PM	A54547
Calcium	130	0.78	10		mg/L	10	9/25/2018 10:34:21 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:32:25 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:32:25 PM	B54392
Iron	3.2	0.16	0.20	*	mg/L	10	9/25/2018 10:34:21 PM	B54392
Magnesium	29	0.25	1.0		mg/L	1	9/25/2018 10:32:25 PM	B54392
Manganese	1.5	0.0039	0.020	*	mg/L	10	9/25/2018 10:34:21 PM	B54392
Potassium	0.69	0.11	1.0	J	mg/L	1	9/25/2018 10:32:25 PM	B54392
Silver	0.0031	0.0018	0.0050	J	mg/L	1	10/1/2018 12:09:50 PM	A54547
Sodium	330	1.6	10		mg/L	10	9/25/2018 10:34:21 PM	B54392
Zinc	0.012	0.0021	0.010		mg/L	1	9/25/2018 10:32:25 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	9/21/2018 1:31:02 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:31:02 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:31:02 PM	B54342
Uranium	0.0032	0.000096	0.00050		mg/L	1	9/21/2018 1:31:02 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-04
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 12:50:00 PM
Lab ID: 1809227-003G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	2.9	0.010	0.020	*	mg/L	10	9/14/2018 6:37:54 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:34:01 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:34:01 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:34:01 PM	40258
Iron	5.7	0.10	0.20	*	mg/L	10	9/14/2018 6:37:54 PM	40258
Manganese	1.4	0.011	0.020	*	mg/L	10	9/14/2018 6:37:54 PM	40258
Silver	0.0022	0.0012	0.0050	J	mg/L	1	9/13/2018 9:34:01 PM	40258
Zinc	0.0054	0.0033	0.010	J	mg/L	1	9/13/2018 9:34:01 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.014	0.00041	0.0010	*	mg/L	1	9/12/2018 5:59:26 PM	40258
Lead	0.00055	0.00023	0.00050		mg/L	1	9/12/2018 5:59:26 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 5:59:26 PM	40258
Uranium	0.0041	0.00034	0.0025		mg/L	5	9/13/2018 7:13:26 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 3:55:45 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	53	2.4	5.0		mg/L	100	9/11/2018 3:50:25 PM	AN5406
Surr: BFB	101	0	69.3-150		%Rec	100	9/11/2018 3:50:25 PM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	10000	87	500		µg/L	500	9/12/2018 6:09:52 PM	W54111
Toluene	5700	84	500		µg/L	500	9/12/2018 6:09:52 PM	W54111
Ethylbenzene	810	11	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Methyl tert-butyl ether (MTBE)	64	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2,4-Trimethylbenzene	370	13	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,3,5-Trimethylbenzene	63	12	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Naphthalene	79	14	100	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
1-Methylnaphthalene	31	17	200	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
2-Methylnaphthalene	33	12	200	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
Acetone	ND	39	500		µg/L	50	9/12/2018 6:39:17 PM	W54111
Bromobenzene	ND	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Bromodichloromethane	ND	14	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Bromoform	ND	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Bromomethane	ND	13	150		µg/L	50	9/12/2018 6:39:17 PM	W54111
2-Butanone	ND	63	500		µg/L	50	9/12/2018 6:39:17 PM	W54111
Carbon disulfide	ND	19	500		µg/L	50	9/12/2018 6:39:17 PM	W54111
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Chlorobenzene	ND	15	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Chloroethane	ND	8.2	100		µg/L	50	9/12/2018 6:39:17 PM	W54111
Chloroform	ND	20	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Chloromethane	ND	15	150		µg/L	50	9/12/2018 6:39:17 PM	W54111
2-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
4-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
cis-1,2-DCE	ND	19	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/12/2018 6:39:17 PM	W54111
Dibromochloromethane	ND	12	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Dibromomethane	ND	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1-Dichloroethane	29	20	50	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/12/2018 6:39:17 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Hexachlorobutadiene	ND	40	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
2-Hexanone	ND	45	500		µg/L	50	9/12/2018 6:39:17 PM	W54111
Isopropylbenzene	24	11	50	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
4-Isopropyltoluene	ND	12	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/12/2018 6:39:17 PM	W54111
Methylene Chloride	ND	10	150		µg/L	50	9/12/2018 6:39:17 PM	W54111
n-Butylbenzene	ND	12	150		µg/L	50	9/12/2018 6:39:17 PM	W54111
n-Propylbenzene	73	12	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
sec-Butylbenzene	ND	10	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Styrene	ND	13	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
tert-Butylbenzene	ND	11	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/12/2018 6:39:17 PM	W54111
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/12/2018 6:39:17 PM	W54111
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/12/2018 6:39:17 PM	W54111
Vinyl chloride	27	5.5	50	J	µg/L	50	9/12/2018 6:39:17 PM	W54111
Xylenes, Total	2500	32	75		µg/L	50	9/12/2018 6:39:17 PM	W54111
Surr: 1,2-Dichloroethane-d4	92.5	0	70-130		%Rec	50	9/12/2018 6:39:17 PM	W54111
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	50	9/12/2018 6:39:17 PM	W54111
Surr: Dibromofluoromethane	88.7	0	70-130		%Rec	50	9/12/2018 6:39:17 PM	W54111
Surr: Toluene-d8	94.0	0	70-130		%Rec	50	9/12/2018 6:39:17 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	1.6	0.63	1.0		mg/L	1	9/10/2018 8:40:34 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 8:40:34 PM	40234
Surr: DNOP	106	0	76.7-135		%Rec	1	9/10/2018 8:40:34 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Aniline	11	6.2	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 6:26:44 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Carbazole	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4-Dimethylphenol	38	5.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 6:26:44 PM	40263
1-Methylnaphthalene	9.9	7.0	10	J	µg/L	1	9/13/2018 6:26:44 PM	40263
2-Methylnaphthalene	11	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2-Methylphenol	110	6.3	10		µg/L	1	9/13/2018 6:26:44 PM	40263
3+4-Methylphenol	120	5.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 6:26:44 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Naphthalene	47	5.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 6:26:44 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 6:26:44 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Phenol	56	6.0	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 6:26:44 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 6:26:44 PM	40263
Surr: 2-Fluorophenol	14.3	0	15-74.1	S	%Rec	1	9/13/2018 6:26:44 PM	40263
Surr: Phenol-d5	36.8	0	15-59.8		%Rec	1	9/13/2018 6:26:44 PM	40263
Surr: 2,4,6-Tribromophenol	83.3	0	22.1-112		%Rec	1	9/13/2018 6:26:44 PM	40263
Surr: Nitrobenzene-d5	61.1	0	33.2-94		%Rec	1	9/13/2018 6:26:44 PM	40263
Surr: 2-Fluorobiphenyl	66.2	0	34-90.9		%Rec	1	9/13/2018 6:26:44 PM	40263
Surr: 4-Terphenyl-d14	95.2	0	15-149		%Rec	1	9/13/2018 6:26:44 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.75	0.15	0.50		mg/L	5	9/6/2018 12:52:42 PM	R53995
Chloride	1200	18	50		mg/L	100	9/24/2018 9:21:05 PM	R54385
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/6/2018 12:52:42 PM	R53995
Bromide	1.1	0.13	0.50		mg/L	5	9/6/2018 12:52:42 PM	R53995
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/6/2018 12:52:42 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/6/2018 12:52:42 PM	R53995
Sulfate	2.0	1.0	2.5	J	mg/L	5	9/6/2018 12:52:42 PM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.0	0.0099	0.020	*	mg/L	10	9/25/2018 10:38:32 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:11:49 PM	A54547
Calcium	190	0.78	10		mg/L	10	9/25/2018 10:38:32 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:36:34 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:36:34 PM	B54392
Iron	5.2	0.16	0.20	*	mg/L	10	9/25/2018 10:38:32 PM	B54392
Magnesium	52	0.25	1.0		mg/L	1	9/25/2018 10:36:34 PM	B54392
Manganese	4.1	0.0039	0.020	*	mg/L	10	9/25/2018 10:38:32 PM	B54392
Potassium	1.4	0.11	1.0		mg/L	1	9/25/2018 10:36:34 PM	B54392
Silver	0.0044	0.0018	0.0050	J	mg/L	1	10/1/2018 12:11:49 PM	A54547
Sodium	830	1.6	10		mg/L	10	9/25/2018 10:38:32 PM	B54392
Zinc	0.0083	0.0021	0.010	J	mg/L	1	9/25/2018 10:36:34 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.013	0.00042	0.0010	*	mg/L	1	9/21/2018 1:33:26 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:33:26 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:33:26 PM	B54342
Uranium	0.0060	0.000096	0.00050		mg/L	1	9/21/2018 1:33:26 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 1:45:00 PM
Lab ID: 1809227-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	2.9	0.010	0.020	*	mg/L	10	9/14/2018 6:39:55 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:36:01 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:36:01 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:36:01 PM	40258
Iron	7.4	0.10	0.20	*	mg/L	10	9/14/2018 6:39:55 PM	40258
Manganese	4.0	0.011	0.020	*	mg/L	10	9/14/2018 6:39:55 PM	40258
Silver	0.0041	0.0012	0.0050	J	mg/L	1	9/13/2018 9:36:01 PM	40258
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 9:36:01 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	9/12/2018 6:55:06 PM	40258
Lead	ND	0.0011	0.0025		mg/L	5	9/12/2018 6:55:06 PM	40258
Selenium	ND	0.0049	0.0050		mg/L	5	9/12/2018 6:55:06 PM	40258
Uranium	0.0068	0.00034	0.0025		mg/L	5	9/12/2018 6:55:06 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 3:58:03 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	57	2.4	5.0		mg/L	100	9/12/2018 12:25:03 AM	AN5406
Surr: BFB	102	0	69.3-150		%Rec	100	9/12/2018 12:25:03 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	10000	87	500		µg/L	500	9/12/2018 7:08:34 PM	W54111
Toluene	2400	8.4	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Ethylbenzene	1800	11	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Methyl tert-butyl ether (MTBE)	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2,4-Trimethylbenzene	1000	13	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,3,5-Trimethylbenzene	230	12	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Naphthalene	220	14	100		µg/L	50	9/12/2018 7:37:45 PM	W54111
1-Methylnaphthalene	74	17	200	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
2-Methylnaphthalene	99	12	200	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
Acetone	ND	39	500		µg/L	50	9/12/2018 7:37:45 PM	W54111
Bromobenzene	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Bromodichloromethane	ND	14	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Bromoform	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Bromomethane	ND	13	150		µg/L	50	9/12/2018 7:37:45 PM	W54111
2-Butanone	ND	63	500		µg/L	50	9/12/2018 7:37:45 PM	W54111
Carbon disulfide	ND	19	500		µg/L	50	9/12/2018 7:37:45 PM	W54111
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Chlorobenzene	ND	15	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Chloroethane	63	8.2	100	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
Chloroform	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Chloromethane	ND	15	150		µg/L	50	9/12/2018 7:37:45 PM	W54111
2-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
4-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
cis-1,2-DCE	47	19	50	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/12/2018 7:37:45 PM	W54111
Dibromochloromethane	ND	12	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Dibromomethane	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1-Dichloroethane	ND	20	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1-Dichloroethene	12	6.0	50	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/12/2018 7:37:45 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Hexachlorobutadiene	ND	40	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
2-Hexanone	ND	45	500		µg/L	50	9/12/2018 7:37:45 PM	W54111
Isopropylbenzene	62	11	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
4-Isopropyltoluene	ND	12	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/12/2018 7:37:45 PM	W54111
Methylene Chloride	ND	10	150		µg/L	50	9/12/2018 7:37:45 PM	W54111
n-Butylbenzene	14	12	150	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
n-Propylbenzene	150	12	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
sec-Butylbenzene	ND	10	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Styrene	ND	13	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
tert-Butylbenzene	ND	11	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/12/2018 7:37:45 PM	W54111
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/12/2018 7:37:45 PM	W54111
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/12/2018 7:37:45 PM	W54111
Vinyl chloride	18	5.5	50	J	µg/L	50	9/12/2018 7:37:45 PM	W54111
Xylenes, Total	8100	32	75		µg/L	50	9/12/2018 7:37:45 PM	W54111
Surr: 1,2-Dichloroethane-d4	89.9	0	70-130		%Rec	50	9/12/2018 7:37:45 PM	W54111
Surr: 4-Bromofluorobenzene	98.9	0	70-130		%Rec	50	9/12/2018 7:37:45 PM	W54111
Surr: Dibromofluoromethane	87.5	0	70-130		%Rec	50	9/12/2018 7:37:45 PM	W54111
Surr: Toluene-d8	97.9	0	70-130		%Rec	50	9/12/2018 7:37:45 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.5	0.63	1.0		mg/L	1	9/10/2018 9:05:10 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 9:05:10 PM	40234
Surr: DNOP	106	0	76.7-135		%Rec	1	9/10/2018 9:05:10 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 6:56:17 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Carbazole	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4-Dimethylphenol	13	5.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 6:56:17 PM	40263
1-Methylnaphthalene	50	7.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Methylnaphthalene	64	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Methylphenol	10	6.3	10		µg/L	1	9/13/2018 6:56:17 PM	40263
3+4-Methylphenol	10	5.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 6:56:17 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Naphthalene	130	5.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 6:56:17 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 6:56:17 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Phenol	30	6.0	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 6:56:17 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 6:56:17 PM	40263
Surr: 2-Fluorophenol	1.73	0	15-74.1	S	%Rec	1	9/13/2018 6:56:17 PM	40263
Surr: Phenol-d5	31.8	0	15-59.8		%Rec	1	9/13/2018 6:56:17 PM	40263
Surr: 2,4,6-Tribromophenol	70.0	0	22.1-112		%Rec	1	9/13/2018 6:56:17 PM	40263
Surr: Nitrobenzene-d5	55.7	0	33.2-94		%Rec	1	9/13/2018 6:56:17 PM	40263
Surr: 2-Fluorobiphenyl	57.4	0	34-90.9		%Rec	1	9/13/2018 6:56:17 PM	40263
Surr: 4-Terphenyl-d14	81.9	0	15-149		%Rec	1	9/13/2018 6:56:17 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.85	0.15	0.50		mg/L	5	9/6/2018 1:18:24 PM	R53995
Chloride	340	0.59	10		mg/L	20	9/6/2018 1:31:16 PM	R53995
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/6/2018 1:18:24 PM	R53995
Bromide	0.90	0.13	0.50		mg/L	5	9/6/2018 1:18:24 PM	R53995
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/6/2018 1:18:24 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/6/2018 1:18:24 PM	R53995
Sulfate	ND	1.0	2.5		mg/L	5	9/6/2018 1:18:24 PM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	4.2	0.0099	0.020	*	mg/L	10	9/25/2018 10:42:35 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:13:50 PM	A54547
Calcium	130	0.78	10		mg/L	10	9/25/2018 10:42:35 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:40:39 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:40:39 PM	B54392
Iron	6.8	0.16	0.20	*	mg/L	10	9/25/2018 10:42:35 PM	B54392
Magnesium	30	0.25	1.0		mg/L	1	9/25/2018 10:40:39 PM	B54392
Manganese	2.9	0.0039	0.020	*	mg/L	10	9/25/2018 10:42:35 PM	B54392
Potassium	0.65	0.11	1.0	J	mg/L	1	9/25/2018 10:40:39 PM	B54392
Silver	0.0027	0.0018	0.0050	J	mg/L	1	10/1/2018 12:13:50 PM	A54547
Sodium	260	1.6	10		mg/L	10	9/25/2018 10:42:35 PM	B54392
Zinc	0.0092	0.0021	0.010	J	mg/L	1	9/25/2018 10:40:39 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0090	0.00042	0.0010		mg/L	1	9/21/2018 1:43:01 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:43:01 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:43:01 PM	B54342
Uranium	0.00022	0.000096	0.00050	J	mg/L	1	9/21/2018 1:43:01 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 3:30:00 PM
Lab ID: 1809227-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	4.0	0.010	0.020	*	mg/L	10	9/14/2018 6:42:01 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:38:02 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:38:02 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:38:02 PM	40258
Iron	7.7	0.10	0.20	*	mg/L	10	9/14/2018 6:42:01 PM	40258
Manganese	2.8	0.011	0.020	*	mg/L	10	9/14/2018 6:42:01 PM	40258
Silver	0.0028	0.0012	0.0050	J	mg/L	1	9/13/2018 9:38:02 PM	40258
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 9:38:02 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.011	0.00041	0.0010	*	mg/L	1	9/12/2018 6:04:01 PM	40258
Lead	0.00053	0.00023	0.00050		mg/L	1	9/12/2018 6:04:01 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 6:04:01 PM	40258
Uranium	0.00021	0.000068	0.00050	J	mg/L	1	9/13/2018 7:15:44 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 4:00:19 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	11	0.49	1.0		mg/L	20	9/12/2018 12:48:19 AM	AN5406
Surr: BFB	107	0	69.3-150		%Rec	20	9/12/2018 12:48:19 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	2700	35	200		µg/L	200	9/12/2018 8:06:54 PM	W54111
Toluene	19	3.4	20	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
Ethylbenzene	250	4.5	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Methyl tert-butyl ether (MTBE)	430	6.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2,4-Trimethylbenzene	99	5.1	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2-Dichloroethane (EDC)	ND	8.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Naphthalene	73	5.8	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
1-Methylnaphthalene	76	6.7	80	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
2-Methylnaphthalene	17	4.8	80	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
Acetone	ND	16	200		µg/L	20	9/12/2018 8:35:55 PM	W54111
Bromobenzene	ND	6.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Bromodichloromethane	ND	5.7	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Bromoform	ND	6.5	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Bromomethane	ND	5.1	60		µg/L	20	9/12/2018 8:35:55 PM	W54111
2-Butanone	ND	25	200		µg/L	20	9/12/2018 8:35:55 PM	W54111
Carbon disulfide	ND	7.7	200		µg/L	20	9/12/2018 8:35:55 PM	W54111
Carbon Tetrachloride	ND	2.7	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Chlorobenzene	ND	5.8	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Chloroethane	ND	3.3	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
Chloroform	ND	8.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Chloromethane	ND	5.9	60		µg/L	20	9/12/2018 8:35:55 PM	W54111
2-Chlorotoluene	ND	8.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
4-Chlorotoluene	ND	8.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
cis-1,2-DCE	21	7.5	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
Dibromochloromethane	ND	4.7	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Dibromomethane	ND	6.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,4-Dichlorobenzene	ND	8.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Dichlorodifluoromethane	ND	20	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1-Dichloroethane	19	8.0	20	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1-Dichloroethene	28	2.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2-Dichloropropane	ND	3.1	20		µg/L	20	9/12/2018 8:35:55 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	5.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
2,2-Dichloropropane	ND	3.7	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1-Dichloropropene	ND	3.2	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Hexachlorobutadiene	ND	16	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
2-Hexanone	ND	18	200		µg/L	20	9/12/2018 8:35:55 PM	W54111
Isopropylbenzene	17	4.4	20	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
4-Isopropyltoluene	ND	4.8	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	9/12/2018 8:35:55 PM	W54111
Methylene Chloride	ND	4.1	60		µg/L	20	9/12/2018 8:35:55 PM	W54111
n-Butylbenzene	6.7	5.0	60	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
n-Propylbenzene	39	4.9	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
sec-Butylbenzene	4.3	4.0	20	J	µg/L	20	9/12/2018 8:35:55 PM	W54111
Styrene	ND	5.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
tert-Butylbenzene	ND	4.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
trans-1,2-DCE	ND	3.7	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1,1-Trichloroethane	28	3.1	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Trichlorofluoromethane	ND	3.4	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
1,2,3-Trichloropropane	ND	11	40		µg/L	20	9/12/2018 8:35:55 PM	W54111
Vinyl chloride	ND	2.2	20		µg/L	20	9/12/2018 8:35:55 PM	W54111
Xylenes, Total	84	13	30		µg/L	20	9/12/2018 8:35:55 PM	W54111
Surr: 1,2-Dichloroethane-d4	94.1	0	70-130		%Rec	20	9/12/2018 8:35:55 PM	W54111
Surr: 4-Bromofluorobenzene	99.5	0	70-130		%Rec	20	9/12/2018 8:35:55 PM	W54111
Surr: Dibromofluoromethane	91.1	0	70-130		%Rec	20	9/12/2018 8:35:55 PM	W54111
Surr: Toluene-d8	100	0	70-130		%Rec	20	9/12/2018 8:35:55 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	2.4	0.63	1.0		mg/L	1	9/10/2018 9:29:43 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 9:29:43 PM	40234
Surr: DNOP	111	0	76.7-135		%Rec	1	9/10/2018 9:29:43 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 7:26:09 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Carbazole	9.6	6.3	10	J	µg/L	1	9/13/2018 7:26:09 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 7:26:09 PM	40263
1-Methylnaphthalene	36	7.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 7:26:09 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 7:26:09 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Naphthalene	29	5.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 7:26:09 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 7:26:09 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Phenol	ND	6.0	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 7:26:09 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 7:26:09 PM	40263
Surr: 2-Fluorophenol	23.9	0	15-74.1		%Rec	1	9/13/2018 7:26:09 PM	40263
Surr: Phenol-d5	20.0	0	15-59.8		%Rec	1	9/13/2018 7:26:09 PM	40263
Surr: 2,4,6-Tribromophenol	46.6	0	22.1-112		%Rec	1	9/13/2018 7:26:09 PM	40263
Surr: Nitrobenzene-d5	37.3	0	33.2-94		%Rec	1	9/13/2018 7:26:09 PM	40263
Surr: 2-Fluorobiphenyl	38.0	0	34-90.9		%Rec	1	9/13/2018 7:26:09 PM	40263
Surr: 4-Terphenyl-d14	64.5	0	15-149		%Rec	1	9/13/2018 7:26:09 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.52	0.15	0.50		mg/L	5	9/6/2018 1:44:08 PM	R53995
Chloride	260	0.59	10		mg/L	20	9/6/2018 1:56:59 PM	R53995
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/6/2018 1:44:08 PM	R53995
Bromide	1.3	0.13	0.50		mg/L	5	9/6/2018 1:44:08 PM	R53995
Nitrogen, Nitrate (As N)	0.066	0.033	0.50	J	mg/L	5	9/6/2018 1:44:08 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/6/2018 1:44:08 PM	R53995
Sulfate	17	1.0	2.5		mg/L	5	9/6/2018 1:44:08 PM	R53995

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.54	0.00099	0.0020		mg/L	1	9/25/2018 10:44:36 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:15:49 PM	A54547
Calcium	160	0.78	10		mg/L	10	9/25/2018 10:54:33 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:44:36 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:44:36 PM	B54392
Iron	0.94	0.016	0.020	*	mg/L	1	9/25/2018 10:44:36 PM	B54392
Magnesium	30	0.25	1.0		mg/L	1	9/25/2018 10:44:36 PM	B54392
Manganese	4.4	0.0039	0.020	*	mg/L	10	9/25/2018 10:54:33 PM	B54392
Potassium	0.60	0.11	1.0	J	mg/L	1	9/25/2018 10:44:36 PM	B54392
Silver	0.0041	0.0018	0.0050	J	mg/L	1	10/1/2018 12:15:49 PM	A54547
Sodium	240	1.6	10		mg/L	10	9/25/2018 10:54:33 PM	B54392
Zinc	0.0083	0.0021	0.010	J	mg/L	1	9/25/2018 10:44:36 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0019	0.00042	0.0010		mg/L	1	9/21/2018 1:45:23 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:45:23 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:45:23 PM	B54342
Uranium	0.0038	0.000096	0.00050		mg/L	1	9/21/2018 1:45:23 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-09
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018 4:10:00 PM
Lab ID: 1809227-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.57	0.0010	0.0020		mg/L	1	9/13/2018 9:40:01 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:40:01 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:40:01 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:40:01 PM	40258
Iron	1.8	0.10	0.20	*	mg/L	10	9/14/2018 6:44:02 PM	40258
Manganese	4.2	0.011	0.020	*	mg/L	10	9/14/2018 6:44:02 PM	40258
Silver	0.0035	0.0012	0.0050	J	mg/L	1	9/13/2018 9:40:01 PM	40258
Zinc	ND	0.0033	0.010		mg/L	1	9/13/2018 9:40:01 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0028	0.00041	0.0010		mg/L	1	9/12/2018 6:10:55 PM	40258
Lead	0.00072	0.00023	0.00050		mg/L	1	9/12/2018 6:10:55 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 6:10:55 PM	40258
Uranium	0.0040	0.000068	0.00050		mg/L	1	9/12/2018 6:10:55 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 4:02:34 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	12	0.49	1.0		mg/L	20	9/12/2018 1:11:38 AM	AN5406
Surr: BFB	112	0	69.3-150		%Rec	20	9/12/2018 1:11:38 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1100	17	100		µg/L	100	9/12/2018 9:05:00 PM	W54111
Toluene	15	1.7	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Ethylbenzene	790	2.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Methyl tert-butyl ether (MTBE)	1700	3.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2,4-Trimethylbenzene	520	2.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,3,5-Trimethylbenzene	100	2.3	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2-Dichloroethane (EDC)	4.0	4.0	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Naphthalene	340	2.9	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
1-Methylnaphthalene	180	3.4	40		µg/L	10	9/12/2018 9:34:06 PM	W54111
2-Methylnaphthalene	190	2.4	40		µg/L	10	9/12/2018 9:34:06 PM	W54111
Acetone	8.8	7.9	100	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
Bromobenzene	ND	3.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Bromodichloromethane	ND	2.8	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Bromoform	ND	3.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Bromomethane	ND	2.6	30		µg/L	10	9/12/2018 9:34:06 PM	W54111
2-Butanone	ND	13	100		µg/L	10	9/12/2018 9:34:06 PM	W54111
Carbon disulfide	ND	3.9	100		µg/L	10	9/12/2018 9:34:06 PM	W54111
Carbon Tetrachloride	ND	1.3	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Chlorobenzene	ND	2.9	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Chloroethane	ND	1.6	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
Chloroform	ND	4.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Chloromethane	ND	2.9	30		µg/L	10	9/12/2018 9:34:06 PM	W54111
2-Chlorotoluene	ND	4.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
4-Chlorotoluene	ND	4.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
cis-1,2-DCE	7.2	3.8	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
Dibromochloromethane	ND	2.4	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Dibromomethane	ND	3.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,4-Dichlorobenzene	ND	4.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Dichlorodifluoromethane	ND	10	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1-Dichloroethane	7.3	4.0	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1-Dichloroethene	8.1	1.2	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2-Dichloropropane	ND	1.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	2.7	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
2,2-Dichloropropane	ND	1.8	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1-Dichloropropene	ND	1.6	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Hexachlorobutadiene	ND	8.0	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
2-Hexanone	ND	9.1	100		µg/L	10	9/12/2018 9:34:06 PM	W54111
Isopropylbenzene	29	2.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
4-Isopropyltoluene	4.2	2.4	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	9/12/2018 9:34:06 PM	W54111
Methylene Chloride	ND	2.1	30		µg/L	10	9/12/2018 9:34:06 PM	W54111
n-Butylbenzene	11	2.5	30	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
n-Propylbenzene	69	2.4	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
sec-Butylbenzene	4.7	2.0	10	J	µg/L	10	9/12/2018 9:34:06 PM	W54111
Styrene	ND	2.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
tert-Butylbenzene	ND	2.2	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
trans-1,2-DCE	ND	1.8	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1,1-Trichloroethane	ND	1.5	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Trichlorofluoromethane	ND	1.7	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	9/12/2018 9:34:06 PM	W54111
Vinyl chloride	ND	1.1	10		µg/L	10	9/12/2018 9:34:06 PM	W54111
Xylenes, Total	900	6.4	15		µg/L	10	9/12/2018 9:34:06 PM	W54111
Surr: 1,2-Dichloroethane-d4	94.2	0	70-130		%Rec	10	9/12/2018 9:34:06 PM	W54111
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	10	9/12/2018 9:34:06 PM	W54111
Surr: Dibromofluoromethane	91.2	0	70-130		%Rec	10	9/12/2018 9:34:06 PM	W54111
Surr: Toluene-d8	100	0	70-130		%Rec	10	9/12/2018 9:34:06 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.0	0.63	1.0		mg/L	1	9/10/2018 9:54:12 PM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/10/2018 9:54:12 PM	40234
Surr: DNOP	118	0	76.7-135		%Rec	1	9/10/2018 9:54:12 PM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/11/2018 12:26:58 AM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 7:55:50 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Carbazole	18	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4-Dimethylphenol	6.2	5.9	10	J	µg/L	1	9/13/2018 7:55:50 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Fluorene	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 7:55:50 PM	40263
1-Methylnaphthalene	130	7.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2-Methylnaphthalene	160	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 7:55:50 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 7:55:50 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Naphthalene	260	10	20		µg/L	2	9/18/2018 5:08:52 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 7:55:50 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 7:55:50 PM	40263
Phenanthrene	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Phenol	ND	6.0	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 7:55:50 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 7:55:50 PM	40263
Surr: 2-Fluorophenol	26.8	0	15-74.1		%Rec	1	9/13/2018 7:55:50 PM	40263
Surr: Phenol-d5	37.3	0	15-59.8		%Rec	1	9/13/2018 7:55:50 PM	40263
Surr: 2,4,6-Tribromophenol	80.2	0	22.1-112		%Rec	1	9/13/2018 7:55:50 PM	40263
Surr: Nitrobenzene-d5	75.8	0	33.2-94		%Rec	1	9/13/2018 7:55:50 PM	40263
Surr: 2-Fluorobiphenyl	78.8	0	34-90.9		%Rec	1	9/13/2018 7:55:50 PM	40263
Surr: 4-Terphenyl-d14	89.2	0	15-149		%Rec	1	9/13/2018 7:55:50 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.0	0.15	0.50		mg/L	5	9/6/2018 2:35:35 PM	R53995
Chloride	200	0.59	10		mg/L	20	9/6/2018 2:48:27 PM	R53995
Bromide	2.4	0.13	0.50		mg/L	5	9/6/2018 2:35:35 PM	R53995
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/6/2018 2:35:35 PM	R53995
Sulfate	4.6	1.0	2.5		mg/L	5	9/6/2018 2:35:35 PM	R53995
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/24/2018 9:46:49 PM	R54385

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	3.1	0.0099	0.020	*	mg/L	10	9/25/2018 10:58:41 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:24:27 PM	A54547
Calcium	120	0.78	10		mg/L	10	9/25/2018 10:58:41 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 10:56:46 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 10:56:46 PM	B54392
Iron	3.2	0.16	0.20	*	mg/L	10	9/25/2018 10:58:41 PM	B54392
Magnesium	30	0.25	1.0		mg/L	1	9/25/2018 10:56:46 PM	B54392
Manganese	1.5	0.0039	0.020	*	mg/L	10	9/25/2018 10:58:41 PM	B54392
Potassium	0.63	0.11	1.0	J	mg/L	1	9/25/2018 10:56:46 PM	B54392
Silver	0.0029	0.0018	0.0050	J	mg/L	1	10/1/2018 12:24:27 PM	A54547
Sodium	320	1.6	10		mg/L	10	9/25/2018 10:58:41 PM	B54392
Zinc	0.0098	0.0021	0.010	J	mg/L	1	9/25/2018 10:56:46 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	9/21/2018 1:47:46 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:47:46 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:47:46 PM	B54342
Uranium	0.0029	0.000096	0.00050		mg/L	1	9/21/2018 1:47:46 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP11
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/4/2018
Lab ID: 1809227-007G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	3.0	0.010	0.020	*	mg/L	10	9/14/2018 6:52:43 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:42:00 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:42:00 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:42:00 PM	40258
Iron	6.2	0.10	0.20	*	mg/L	10	9/14/2018 6:52:43 PM	40258
Manganese	1.4	0.011	0.020	*	mg/L	10	9/14/2018 6:52:43 PM	40258
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/13/2018 9:42:00 PM	40258
Zinc	0.0053	0.0033	0.010	J	mg/L	1	9/13/2018 9:42:00 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.013	0.00041	0.0010	*	mg/L	1	9/12/2018 6:13:13 PM	40258
Lead	0.00055	0.00023	0.00050		mg/L	1	9/12/2018 6:13:13 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 6:13:13 PM	40258
Uranium	0.0030	0.000068	0.00050		mg/L	1	9/12/2018 6:13:13 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/21/2018 4:09:28 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809227-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Toluene	ND	0.17	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Naphthalene	ND	0.29	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Acetone	ND	0.79	10		µg/L	1	9/12/2018 2:43:10 PM	W54111
Bromobenzene	ND	0.32	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Bromoform	ND	0.32	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Bromomethane	ND	0.26	3.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
2-Butanone	ND	1.3	10		µg/L	1	9/12/2018 2:43:10 PM	W54111
Carbon disulfide	ND	0.39	10		µg/L	1	9/12/2018 2:43:10 PM	W54111
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Chloroethane	ND	0.16	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Chloroform	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Chloromethane	ND	0.29	3.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Dibromomethane	ND	0.32	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809227-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
2-Hexanone	ND	0.91	10		µg/L	1	9/12/2018 2:43:10 PM	W54111
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/12/2018 2:43:10 PM	W54111
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Styrene	ND	0.25	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/12/2018 2:43:10 PM	W54111
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/12/2018 2:43:10 PM	W54111
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	1	9/12/2018 2:43:10 PM	W54111
Surr: 4-Bromofluorobenzene	96.9	0	70-130		%Rec	1	9/12/2018 2:43:10 PM	W54111
Surr: Dibromofluoromethane	92.4	0	70-130		%Rec	1	9/12/2018 2:43:10 PM	W54111
Surr: Toluene-d8	95.7	0	70-130		%Rec	1	9/12/2018 2:43:10 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0014	0.0020	0.002000	0	69.5	50	150			J
Calcium	0.50	1.0	0.5000	0	99.6	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0045	0.0060	0.006000	0	74.8	50	150			J
Iron	0.013	0.020	0.02000	0	65.2	50	150			J
Magnesium	0.48	1.0	0.5000	0	95.7	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.0	50	150			J
Potassium	0.52	1.0	0.5000	0	104	50	150			J
Sodium	0.34	1.0	0.5000	0	68.8	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	49	1.0	50.00	0	98.2	85	115			
Chromium	0.45	0.0060	0.5000	0	90.1	85	115			
Copper	0.47	0.0060	0.5000	0	94.3	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Magnesium	50	1.0	50.00	0	99.6	85	115			
Manganese	0.46	0.0020	0.5000	0	92.7	85	115			
Potassium	49	1.0	50.00	0	98.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-B**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B54392**		RunNo:	**54392**				
Prep Date:		Analysis Date:	**9/25/2018**		SeqNo:	**1803390**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	48	1.0	50.00	0	95.4	85	115			
Zinc	0.44	0.010	0.5000	0	88.8	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**A54547**		RunNo:	**54547**				
Prep Date:		Analysis Date:	**10/1/2018**		SeqNo:	**1808421**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**A54547**		RunNo:	**54547**				
Prep Date:		Analysis Date:	**10/1/2018**		SeqNo:	**1808422**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0056	0.0050	0.005000	0	111	50	150			

Sample ID	**LCS-A**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**A54547**		RunNo:	**54547**				
Prep Date:		Analysis Date:	**10/1/2018**		SeqNo:	**1808423**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40258**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789752** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40258**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789753** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Cadmium	0.0012	0.0020	0.002000	0	59.5	50	150			J
Chromium	0.0049	0.0060	0.006000	0	81.8	50	150			J
Iron	0.023	0.020	0.02000	0	115	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0054	0.0050	0.005000	0	109	50	150			
Zinc	0.0075	0.010	0.005000	0	150	50	150			J

Sample ID	**LCS-40258**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789754** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	105	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID	**1809227-001GMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**FB11**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789905** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809227-001GMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB11**	Batch ID:	**40258**		RunNo:	**54126**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789905**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.46	0.0060	0.5000	0	91.6	70	130			
Copper	0.49	0.0060	0.5000	0	97.7	70	130			
Iron	0.51	0.020	0.5000	0	101	70	130			
Manganese	0.47	0.0020	0.5000	0	93.6	70	130			
Silver	0.11	0.0050	0.1000	0	110	70	130			
Zinc	0.46	0.010	0.5000	0.003540	90.5	70	130			

Sample ID	**1809227-001GMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB11**	Batch ID:	**40258**		RunNo:	**54126**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**		SeqNo:	**1789906**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.3	70	130	2.59	20	
Cadmium	0.49	0.0020	0.5000	0	97.8	70	130	2.58	20	
Chromium	0.45	0.0060	0.5000	0	89.1	70	130	2.84	20	
Copper	0.48	0.0060	0.5000	0	96.2	70	130	1.52	20	
Iron	0.50	0.020	0.5000	0	101	70	130	0.232	20	
Manganese	0.46	0.0020	0.5000	0	92.4	70	130	1.35	20	
Silver	0.11	0.0050	0.1000	0	108	70	130	2.00	20	
Zinc	0.44	0.010	0.5000	0.003540	87.8	70	130	2.96	20	

Sample ID	**MB-40258**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40258**		RunNo:	**54165**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/14/2018**		SeqNo:	**1790766**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID	**LLLCS-40258**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40258**		RunNo:	**54165**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/14/2018**		SeqNo:	**1790803**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-40258**	SampType: **LCS**		TestCode: **EPA Method 200.7: Total Metals**						
Client ID:	**LCSW**	Batch ID: **40258**		RunNo: **54165**						
Prep Date:	**9/10/2018**	Analysis Date: **9/14/2018**		SeqNo: **1790804**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.48	0.0060	0.5000	0	96.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798638** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798639** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	99.7	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.0	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798640** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Sample ID **1809227-001FMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB11**	Batch ID: **B54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798645** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	70	130			
Lead	0.012	0.00050	0.01250	0	94.9	70	130			
Selenium	0.024	0.0010	0.02500	0	96.8	70	130			
Uranium	0.012	0.00050	0.01250	0	94.0	70	130			

Sample ID **1809227-001FMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB11**	Batch ID: **B54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798646** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809227-001FMSDL**	SampType:	**MSD**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**FB11**	Batch ID:	**B54342**		RunNo:	**54342**				
Prep Date:		Analysis Date:	**9/21/2018**		SeqNo:	**1798646**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.9	70	130	1.75	20	
Lead	0.012	0.00050	0.01250	0	97.1	70	130	2.29	20	
Selenium	0.025	0.0010	0.02500	0	98.4	70	130	1.59	20	
Uranium	0.012	0.00050	0.01250	0	95.4	70	130	1.48	20	

Sample ID	**1809227-002FMSLL**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB11**	Batch ID:	**B54342**		RunNo:	**54342**				
Prep Date:		Analysis Date:	**9/21/2018**		SeqNo:	**1798648**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.2	70	130			
Lead	0.012	0.00050	0.01250	0	95.1	70	130			
Selenium	0.024	0.0010	0.02500	0	97.0	70	130			
Uranium	0.012	0.00050	0.01250	0	93.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809227-002GLLMS**	SampType:	**MSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**EB11**	Batch ID:	**40258**		RunNo:	**54114**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788649**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.2	70	130			
Lead	0.012	0.00050	0.01250	0	98.1	70	130			
Selenium	0.024	0.0010	0.02500	0	97.2	70	130			
Uranium	0.013	0.00050	0.01250	0	101	70	130			

Sample ID	**1809227-002GLLMS**	SampType:	**MSDLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**EB11**	Batch ID:	**40258**		RunNo:	**54114**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788650**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.2	70	130	0.00557	20	
Lead	0.012	0.00050	0.01250	0	98.1	70	130	0.0929	20	
Selenium	0.024	0.0010	0.02500	0	96.6	70	130	0.627	20	
Uranium	0.013	0.00050	0.01250	0	101	70	130	0.571	20	

Sample ID	**MB-40258**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**40258**		RunNo:	**54114**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788671**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40258**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**40258**		RunNo:	**54114**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788672**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.5	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID	**MSLCS-40258**	SampType:	**LCS**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**LCSW**	Batch ID:	**40258**		RunNo:	**54114**				
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**		SeqNo:	**1788673**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLCS-40258**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40258**	RunNo:	**54114**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/12/2018**	SeqNo:	**1788673**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40500**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40500**			RunNo: **54328**					
Prep Date:	**9/21/2018**	Analysis Date: **9/21/2018**			SeqNo: **1798220**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40500**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40500**			RunNo: **54328**					
Prep Date:	**9/21/2018**	Analysis Date: **9/21/2018**			SeqNo: **1798221**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.9	80	120			

Sample ID	**1809227-001GMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB11**	Batch ID: **40500**			RunNo: **54328**					
Prep Date:	**9/21/2018**	Analysis Date: **9/21/2018**			SeqNo: **1798223**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.2	75	125			

Sample ID	**1809227-001GMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**FB11**	Batch ID: **40500**			RunNo: **54328**					
Prep Date:	**9/21/2018**	Analysis Date: **9/21/2018**			SeqNo: **1798224**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.9	75	125	2.40	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R53995**	RunNo: **53995**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1783368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R53995**	RunNo: **53995**
Prep Date:	Analysis Date: **9/6/2018**	SeqNo: **1783369** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	5.1	0.50	5.000	0	101	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	103	90	110			
Bromide	2.6	0.10	2.500	0	103	90	110			
Nitrogen, Nitrate (As N)	2.7	0.10	2.500	0	107	90	110			
Phosphorus, Orthophosphate (As P	5.2	0.50	5.000	0	103	90	110			
Sulfate	10	0.50	10.00	0	104	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40238**	SampType: **MBLK**			TestCode: **EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID: **40238**			RunNo: **54050**					
Prep Date:	**9/10/2018**	Analysis Date: **9/10/2018**			SeqNo: **1785820**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40238**	SampType: **LCS**			TestCode: **EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID: **40238**			RunNo: **54050**					
Prep Date:	**9/10/2018**	Analysis Date: **9/10/2018**			SeqNo: **1785822**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.7	70	130			

Sample ID	**1809227-001CMS**	SampType: **MS**			TestCode: **EPA Method 8011/504.1: EDB**					
Client ID:	**FB11**	Batch ID: **40238**			RunNo: **54050**					
Prep Date:	**9/10/2018**	Analysis Date: **9/10/2018**			SeqNo: **1785824**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.061	0.0094	0.09358	0	65.1	55	125			

Sample ID	**1809227-001CMSD**	SampType: **MSD**			TestCode: **EPA Method 8011/504.1: EDB**					
Client ID:	**FB11**	Batch ID: **40238**			RunNo: **54050**					
Prep Date:	**9/10/2018**	Analysis Date: **9/10/2018**			SeqNo: **1785826**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.066	0.0095	0.09485	0	69.3	55	125	7.60	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809227-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB11**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785559** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	105	82.8	143			
Surr: DNOP	0.50		0.5000		99.7	76.7	135			

Sample ID **1809227-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB11**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785560** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.5	1.0	5.000	0	109	82.8	143	4.29	20	
Surr: DNOP	0.53		0.5000		106	76.7	135	0	0	

Sample ID **LCS-40234**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	107	70	130			
Surr: DNOP	0.50		0.5000		99.5	76.7	135			

Sample ID **MB-40234**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.98		1.000		98.1	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.0	69.3	150			

Sample ID **2.5UG GRO LCS-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786954** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	79.5	127			
Surr: BFB	22		20.00		108	69.3	150			

Sample ID **1809227-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-04**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	1.0	10.00	12.34	125	52.5	149			
Surr: BFB	510		400.0		128	69.3	150			

Sample ID **1809227-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-04**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	1.0	10.00	12.34	134	52.5	149	3.61	20	
Surr: BFB	520		400.0		129	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809227-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-04**	Batch ID: **W54111**	RunNo: **54111**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788433** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1300	10	200.0	1099	101	60.5	137			E
Toluene	200	10	200.0	13.67	91.0	70	130			
Chlorobenzene	200	10	200.0	0	102	70	130			
1,1-Dichloroethene	200	10	200.0	7.740	98.3	70	130			
Trichloroethene (TCE)	170	10	200.0	0	85.6	70	130			
Surr: 1,2-Dichloroethane-d4	99		100.0		99.0	70	130			
Surr: 4-Bromofluorobenzene	92		100.0		92.0	70	130			
Surr: Dibromofluoromethane	92		100.0		91.6	70	130			
Surr: Toluene-d8	98		100.0		97.5	70	130			

Sample ID **1809227-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-04**	Batch ID: **W54111**	RunNo: **54111**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1200	10	200.0	1099	74.5	60.5	137	4.09	20	E
Toluene	200	10	200.0	13.67	91.8	70	130	0.854	20	
Chlorobenzene	200	10	200.0	0	97.6	70	130	4.09	20	
1,1-Dichloroethene	190	10	200.0	7.740	90.1	70	130	8.37	20	
Trichloroethene (TCE)	170	10	200.0	0	83.2	70	130	2.84	20	
Surr: 1,2-Dichloroethane-d4	97		100.0		97.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	91		100.0		91.2	70	130	0	0	
Surr: Dibromofluoromethane	93		100.0		92.6	70	130	0	0	
Surr: Toluene-d8	100		100.0		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809227-003dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-04**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790010** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	92	10	100.0	0	91.6	15	123			
4-Chloro-3-methylphenol	170	10	200.0	0	86.4	26.6	118			
2-Chlorophenol	110	10	200.0	0	56.8	15	120			
1,4-Dichlorobenzene	67	10	100.0	0	66.9	19	108			
2,4-Dinitrotoluene	77	10	100.0	0	77.1	27.8	103			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.1	32.3	126			
4-Nitrophenol	46	10	200.0	0	22.9	15	72.1			
Pentachlorophenol	130	20	200.0	0	62.5	15	114			
Phenol	86	10	200.0	0	42.8	15	67.5			
Pyrene	89	10	100.0	0	88.7	31.2	112			
1,2,4-Trichlorobenzene	72	10	100.0	0	71.8	22.1	123			
Surr: 2-Fluorophenol	51		200.0		25.6	15	74.1			
Surr: Phenol-d5	85		200.0		42.4	15	59.8			
Surr: 2,4,6-Tribromophenol	160		200.0		82.2	22.1	112			
Surr: Nitrobenzene-d5	69		100.0		69.1	33.2	94			
Surr: 2-Fluorobiphenyl	83		100.0		83.1	34	90.9			
Surr: 4-Terphenyl-d14	93		100.0		92.6	15	149			

Sample ID **1809227-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-04**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790011** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.5	15	123	21.9	30.5	
4-Chloro-3-methylphenol	130	10	200.0	0	65.8	26.6	118	27.1	50	
2-Chlorophenol	100	10	200.0	0	51.3	15	120	10.3	36.3	
1,4-Dichlorobenzene	64	10	100.0	0	64.2	19	108	4.00	42.1	
2,4-Dinitrotoluene	58	10	100.0	0	57.9	27.8	103	28.4	28.5	
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	32.3	126	6.29	25.4	
4-Nitrophenol	16	10	200.0	0	8.20	15	72.1	94.4	50	RS
Pentachlorophenol	68	20	200.0	0	34.2	15	114	58.6	50	R
Phenol	76	10	200.0	0	38.0	15	67.5	11.8	46.1	
Pyrene	71	10	100.0	0	71.3	31.2	112	21.8	34.3	
1,2,4-Trichlorobenzene	68	10	100.0	0	67.9	22.1	123	5.64	43.6	
Surr: 2-Fluorophenol	48		200.0		24.0	15	74.1	0	0	
Surr: Phenol-d5	73		200.0		36.5	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		63.4	22.1	112	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.1	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.5	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809227-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-04**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790011** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.2	15	149	0	0	

Sample ID **lcs-40263**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790019** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.3	55.1	104			
4-Chloro-3-methylphenol	140	10	200.0	0	69.7	57	115			
2-Chlorophenol	130	10	200.0	0	64.6	43.4	112			
1,4-Dichlorobenzene	57	10	100.0	0	56.9	38	95.2			
2,4-Dinitrotoluene	61	10	100.0	0	60.8	55.1	96.7			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.0	55	112			
4-Nitrophenol	100	10	200.0	0	51.8	16.6	93			
Pentachlorophenol	140	20	200.0	0	69.4	43.2	104			
Phenol	79	10	200.0	0	39.7	21.3	85.7			
Pyrene	80	10	100.0	0	80.4	64.9	105			
1,2,4-Trichlorobenzene	66	10	100.0	0	65.6	42.6	107			
Surr: 2-Fluorophenol	97		200.0		48.7	15	74.1			
Surr: Phenol-d5	85		200.0		42.4	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		67.5	22.1	112			
Surr: Nitrobenzene-d5	62		100.0		61.9	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		62.0	34	90.9			
Surr: 4-Terphenyl-d14	100		100.0		99.6	15	149			

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**	
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	7.1	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**	
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	80		200.0		39.9	15	74.1			
Surr: Phenol-d5	82		200.0		41.1	15	59.8			
Surr: 2,4,6-Tribromophenol	110		200.0		56.2	22.1	112			
Surr: Nitrobenzene-d5	73		100.0		73.3	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		70.4	34	90.9			
Surr: 4-Terphenyl-d14	95		100.0		95.4	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: **1809227** | RcptNo: **1**

Received By: **Erin Melendrez** **9/6/2018 9:30:00 AM**

Completed By: **Ashley Gallegos** **9/7/2018 8:23:13 AM**

Reviewed By: ENM 9/7/18

Labeled by: JAB 09/07/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 21 (<2 or >12 unless noted)

Adjusted? JAB 09/07/18 No Yes

Checked by: JAB 09/07/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: For metals analysis: Added approx. 0.5 mL HNO3 to 0036, 004F, and 007 for preferred pH. Held for 24 hours prior to analysis.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			
2	0.1	Good	Yes			
3	1.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: **X** Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809227	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1155	H_2O	FB11	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber - 1	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/6/18	9/6/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Cooler 1: 1.1-1.0((F)=0.1
Cooler 2: 1.1-1.0(CF)=0.1
Cooler 3: 2.1-1.0(CF)=1.

ENM 9/6/18

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809227	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1215	H_2O	EB11	40ml VOA-5	HCl	-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/16/18	9/16/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler1: 1.1-1.0(CF)=0.1

Cooler2: 1.1-1.0(CF)=0.1

Cooler3: 1.1-1.0(CF)=1.1

ENM 9/16/18

5 OF 1

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1250	H_2O	MKTF-04	40ml VOA-5	HCl	1809227-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/16/18	9/16/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler1: 1.1-1.0(CF)=0.1

Cooler2: 1.1-1.0(CF)=0.1

Cooler3: 2.1-1.0(CF)=1.1

ENM 9/16/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: **X** Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809227	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1345	H_2O	MKTF- 11	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/6/18	9/6/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler 1: 1.1-1.0(+)=0.1
Cooler 2: 1.1-1.0(+)=0.1
ENM 9/6/18 Cooler 3: 2.1-1.0(+)=1.1

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: **X** Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809927	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1530	H_2O	MKTF-10	40ml VOA-5	HCl	-005			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/6/18	9/6/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE Cooler 1: 1.1-1.0(CF)=0.1
Cooler 2: 1.1-1.0(CF)=0.1
ENM 9/6/18 Cooler 3: 2.1-1.0(CF)=1.1

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809327	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	1610	H_2O	MKTF-09	40ml VOA-5	HCl	-006			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENH 9/6/18	9/6/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler 1: 1.1-1.0(CF)=0.1
Cooler 2: 1.1-1.0(CF)=0.1
Cooler 3: 2.1-1.0(CF)=1.1

ENH 9/6/18

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: X Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809227	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011) & EDC	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/4/18	—	H_2O	DUP11	40ml VOA-5	HCl	-007			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter Amber -1	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X					
				125 ml Plastic-1	HNO_3													X	X				
				125 ml Plastic-1	H_2SO_4														X				
				125 ml Plastic-1	Neat														X				
9/4/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	-008										X							

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/5/18	0700		Courier ENM 9/6/18	9/6/18	0930
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE
Cooler 1: 1.1-1.0(F)=0.1
Cooler 2: 1.1-1.0(F)=0.1
Cooler 3: 2.1-1.0(F)=1.1
ENM 9/6/18

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1809375

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/7/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	25	1.2	2.5		mg/L	50	9/12/2018 1:09:13 PM	GW540
Surr: BFB	104	0	69.3-150		%Rec	50	9/12/2018 1:09:13 PM	GW540
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	7400	87	500		µg/L	500	9/12/2018 11:30:44 PM	W54111
Toluene	19	8.4	50	J	µg/L	50	9/12/2018 11:59:45 PM	W54111
Ethylbenzene	1500	11	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Methyl tert-butyl ether (MTBE)	1300	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2,4-Trimethylbenzene	39	13	50	J	µg/L	50	9/12/2018 11:59:45 PM	W54111
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Naphthalene	630	14	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
1-Methylnaphthalene	350	17	200		µg/L	50	9/12/2018 11:59:45 PM	W54111
2-Methylnaphthalene	490	12	200		µg/L	50	9/12/2018 11:59:45 PM	W54111
Acetone	ND	39	500		µg/L	50	9/12/2018 11:59:45 PM	W54111
Bromobenzene	ND	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Bromodichloromethane	ND	14	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Bromoform	ND	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Bromomethane	ND	13	150		µg/L	50	9/12/2018 11:59:45 PM	W54111
2-Butanone	ND	63	500		µg/L	50	9/12/2018 11:59:45 PM	W54111
Carbon disulfide	ND	19	500		µg/L	50	9/12/2018 11:59:45 PM	W54111
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Chlorobenzene	ND	15	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Chloroethane	ND	8.2	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
Chloroform	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Chloromethane	ND	15	150		µg/L	50	9/12/2018 11:59:45 PM	W54111
2-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
4-Chlorotoluene	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
cis-1,2-DCE	ND	19	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
Dibromochloromethane	ND	12	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Dibromomethane	ND	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1-Dichloroethane	ND	20	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/12/2018 11:59:45 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Hexachlorobutadiene	ND	40	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
2-Hexanone	ND	45	500		µg/L	50	9/12/2018 11:59:45 PM	W54111
Isopropylbenzene	36	11	50	J	µg/L	50	9/12/2018 11:59:45 PM	W54111
4-Isopropyltoluene	ND	12	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/12/2018 11:59:45 PM	W54111
Methylene Chloride	ND	10	150		µg/L	50	9/12/2018 11:59:45 PM	W54111
n-Butylbenzene	ND	12	150		µg/L	50	9/12/2018 11:59:45 PM	W54111
n-Propylbenzene	80	12	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
sec-Butylbenzene	ND	10	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Styrene	ND	13	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
tert-Butylbenzene	ND	11	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/12/2018 11:59:45 PM	W54111
Vinyl chloride	ND	5.5	50		µg/L	50	9/12/2018 11:59:45 PM	W54111
Xylenes, Total	110	32	75		µg/L	50	9/12/2018 11:59:45 PM	W54111
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	50	9/12/2018 11:59:45 PM	W54111
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	50	9/12/2018 11:59:45 PM	W54111
Surr: Dibromofluoromethane	91.6	0	70-130		%Rec	50	9/12/2018 11:59:45 PM	W54111
Surr: Toluene-d8	98.9	0	70-130		%Rec	50	9/12/2018 11:59:45 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.6	0.63	1.0		mg/L	1	9/11/2018 2:22:28 AM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/11/2018 2:22:28 AM	40234
Surr: DNOP	110	0	76.7-135		%Rec	1	9/11/2018 2:22:28 AM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	9/11/2018 2:27:44 AM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	11	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 8:25:31 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 8:25:31 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Carbazole	8.9	6.3	10	J	µg/L	1	9/13/2018 8:25:31 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 8:25:31 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4-Dimethylphenol	9.2	5.9	10	J	µg/L	1	9/13/2018 8:25:31 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Fluorene	14	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 8:25:31 PM	40263
1-Methylnaphthalene	270	14	20		µg/L	2	9/18/2018 5:38:35 PM	40263
2-Methylnaphthalene	410	13	20		µg/L	2	9/18/2018 5:38:35 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 8:25:31 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 8:25:31 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Naphthalene	420	10	20		µg/L	2	9/18/2018 5:38:35 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 8:25:31 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 8:25:31 PM	40263
Phenanthrene	10	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Phenol	48	6.0	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 8:25:31 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 8:25:31 PM	40263
Surr: 2-Fluorophenol	36.2	0	15-74.1		%Rec	1	9/13/2018 8:25:31 PM	40263
Surr: Phenol-d5	36.4	0	15-59.8		%Rec	1	9/13/2018 8:25:31 PM	40263
Surr: 2,4,6-Tribromophenol	81.0	0	22.1-112		%Rec	1	9/13/2018 8:25:31 PM	40263
Surr: Nitrobenzene-d5	65.6	0	33.2-94		%Rec	1	9/13/2018 8:25:31 PM	40263
Surr: 2-Fluorobiphenyl	71.6	0	34-90.9		%Rec	1	9/13/2018 8:25:31 PM	40263
Surr: 4-Terphenyl-d14	94.9	0	15-149		%Rec	1	9/13/2018 8:25:31 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.82	0.15	0.50		mg/L	5	9/7/2018 10:05:21 AM	R54024
Chloride	190	0.59	10		mg/L	20	9/7/2018 10:18:13 AM	R54024
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/7/2018 10:05:21 AM	R54024
Bromide	1.2	0.13	0.50		mg/L	5	9/7/2018 10:05:21 AM	R54024
Nitrogen, Nitrate (As N)	0.070	0.033	0.50	J	mg/L	5	9/7/2018 10:05:21 AM	R54024
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/7/2018 10:05:21 AM	R54024
Sulfate	ND	1.0	2.5		mg/L	5	9/7/2018 10:05:21 AM	R54024

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	5.9	0.0099	0.020	*	mg/L	10	9/25/2018 11:02:48 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 1:08:27 PM	B54547
Calcium	120	0.78	10		mg/L	10	9/25/2018 11:02:48 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 11:00:53 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 11:00:53 PM	B54392
Iron	13	0.33	0.40	*	mg/L	20	10/1/2018 1:10:26 PM	B54547
Magnesium	36	0.25	1.0		mg/L	1	9/25/2018 11:00:53 PM	B54392
Manganese	1.7	0.0039	0.020	*	mg/L	10	9/25/2018 11:02:48 PM	B54392
Potassium	0.91	0.11	1.0	J	mg/L	1	9/25/2018 11:00:53 PM	B54392
Silver	0.0024	0.0018	0.0050	J	mg/L	1	10/1/2018 1:08:27 PM	B54547
Sodium	200	1.6	10		mg/L	10	9/25/2018 11:02:48 PM	B54392
Zinc	0.010	0.0021	0.010		mg/L	1	9/25/2018 11:00:53 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.015	0.00042	0.0010	*	mg/L	1	9/21/2018 2:16:29 PM	B54342
Lead	0.0018	0.00017	0.00050		mg/L	1	9/21/2018 2:16:29 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 2:16:29 PM	B54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 2:16:29 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MKTF-36
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-001G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	5.8	0.010	0.020	*	mg/L	10	9/14/2018 6:54:45 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:43:58 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:43:58 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:43:58 PM	40258
Iron	12	0.20	0.40	*	mg/L	20	9/14/2018 6:56:40 PM	40258
Manganese	1.6	0.011	0.020	*	mg/L	10	9/14/2018 6:54:45 PM	40258
Silver	0.0020	0.0012	0.0050	J	mg/L	1	9/13/2018 9:43:58 PM	40258
Zinc	0.031	0.0033	0.010		mg/L	1	9/13/2018 9:43:58 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.016	0.00041	0.0010	*	mg/L	1	9/12/2018 6:15:31 PM	40258
Lead	0.0064	0.00023	0.00050		mg/L	1	9/12/2018 6:15:31 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 6:15:31 PM	40258
Uranium	0.00035	0.000068	0.00050	J	mg/L	1	9/12/2018 6:15:31 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000038	0.000038	0.00020	J	mg/L	1	9/21/2018 4:18:37 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	27	1.2	2.5		mg/L	50	9/12/2018 2:19:24 PM	GW540
Surr: BFB	105	0	69.3-150		%Rec	50	9/12/2018 2:19:24 PM	GW540
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	7700	87	500		µg/L	500	9/13/2018 12:28:43 AM	W54111
Toluene	17	8.4	50	J	µg/L	50	9/13/2018 12:57:45 AM	W54111
Ethylbenzene	1600	11	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Methyl tert-butyl ether (MTBE)	1300	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2,4-Trimethylbenzene	31	13	50	J	µg/L	50	9/13/2018 12:57:45 AM	W54111
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Naphthalene	550	14	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
1-Methylnaphthalene	320	17	200		µg/L	50	9/13/2018 12:57:45 AM	W54111
2-Methylnaphthalene	450	12	200		µg/L	50	9/13/2018 12:57:45 AM	W54111
Acetone	ND	39	500		µg/L	50	9/13/2018 12:57:45 AM	W54111
Bromobenzene	ND	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Bromodichloromethane	ND	14	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Bromoform	ND	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Bromomethane	ND	13	150		µg/L	50	9/13/2018 12:57:45 AM	W54111
2-Butanone	ND	63	500		µg/L	50	9/13/2018 12:57:45 AM	W54111
Carbon disulfide	ND	19	500		µg/L	50	9/13/2018 12:57:45 AM	W54111
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Chlorobenzene	ND	15	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Chloroethane	ND	8.2	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
Chloroform	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Chloromethane	ND	15	150		µg/L	50	9/13/2018 12:57:45 AM	W54111
2-Chlorotoluene	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
4-Chlorotoluene	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
cis-1,2-DCE	ND	19	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
Dibromochloromethane	ND	12	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Dibromomethane	ND	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1-Dichloroethane	ND	20	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/13/2018 12:57:45 AM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Hexachlorobutadiene	ND	40	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
2-Hexanone	ND	45	500		µg/L	50	9/13/2018 12:57:45 AM	W54111
Isopropylbenzene	36	11	50	J	µg/L	50	9/13/2018 12:57:45 AM	W54111
4-Isopropyltoluene	ND	12	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/13/2018 12:57:45 AM	W54111
Methylene Chloride	ND	10	150		µg/L	50	9/13/2018 12:57:45 AM	W54111
n-Butylbenzene	ND	12	150		µg/L	50	9/13/2018 12:57:45 AM	W54111
n-Propylbenzene	73	12	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
sec-Butylbenzene	ND	10	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Styrene	ND	13	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
tert-Butylbenzene	ND	11	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/13/2018 12:57:45 AM	W54111
Vinyl chloride	ND	5.5	50		µg/L	50	9/13/2018 12:57:45 AM	W54111
Xylenes, Total	90	32	75		µg/L	50	9/13/2018 12:57:45 AM	W54111
Surr: 1,2-Dichloroethane-d4	97.2	0	70-130		%Rec	50	9/13/2018 12:57:45 AM	W54111
Surr: 4-Bromofluorobenzene	88.3	0	70-130		%Rec	50	9/13/2018 12:57:45 AM	W54111
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	50	9/13/2018 12:57:45 AM	W54111
Surr: Toluene-d8	97.0	0	70-130		%Rec	50	9/13/2018 12:57:45 AM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	5.5	0.63	1.0		mg/L	1	9/11/2018 2:46:53 AM	40234
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/11/2018 2:46:53 AM	40234
Surr: DNOP	110	0	76.7-135		%Rec	1	9/11/2018 2:46:53 AM	40234

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/11/2018 2:42:50 AM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.81	0.15	0.50		mg/L	5	9/7/2018 10:31:04 AM	R54024
Chloride	190	0.59	10		mg/L	20	9/7/2018 10:43:56 AM	R54024
Bromide	1.2	0.13	0.50		mg/L	5	9/7/2018 10:31:04 AM	R54024
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/7/2018 10:31:04 AM	R54024
Sulfate	ND	1.0	2.5		mg/L	5	9/7/2018 10:31:04 AM	R54024
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/24/2018 9:59:39 PM	R54385

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	5.8	0.0099	0.020	*	mg/L	10	9/25/2018 11:06:46 PM	B54392
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 1:20:39 PM	B54547
Calcium	120	0.78	10		mg/L	10	9/25/2018 11:06:46 PM	B54392
Chromium	ND	0.0013	0.0060		mg/L	1	9/25/2018 11:04:50 PM	B54392
Copper	ND	0.0032	0.0060		mg/L	1	9/25/2018 11:04:50 PM	B54392
Iron	13	0.33	0.40	*	mg/L	20	10/1/2018 1:22:38 PM	B54547
Magnesium	35	0.25	1.0		mg/L	1	9/25/2018 11:04:50 PM	B54392
Manganese	1.7	0.0039	0.020	*	mg/L	10	9/25/2018 11:06:46 PM	B54392
Potassium	0.94	0.11	1.0	J	mg/L	1	9/25/2018 11:04:50 PM	B54392
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 1:20:39 PM	B54547
Sodium	200	1.6	10		mg/L	10	9/25/2018 11:06:46 PM	B54392
Zinc	0.0077	0.0021	0.010	J	mg/L	1	9/25/2018 11:04:50 PM	B54392
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.015	0.00042	0.0010	*	mg/L	1	9/21/2018 2:18:54 PM	B54342
Lead	0.0021	0.00017	0.00050		mg/L	1	9/21/2018 2:18:54 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 2:18:54 PM	B54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 2:18:54 PM	B54342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	5.9	0.010	0.020	*	mg/L	10	9/14/2018 6:58:34 PM	40258
Cadmium	ND	0.00058	0.0020		mg/L	1	9/13/2018 9:45:58 PM	40258
Chromium	ND	0.0018	0.0060		mg/L	1	9/13/2018 9:45:58 PM	40258
Copper	ND	0.0041	0.0060		mg/L	1	9/13/2018 9:45:58 PM	40258
Iron	12	0.20	0.40	*	mg/L	20	9/14/2018 7:00:32 PM	40258
Manganese	1.6	0.011	0.020	*	mg/L	10	9/14/2018 6:58:34 PM	40258
Silver	ND	0.0012	0.0050		mg/L	1	9/13/2018 9:45:58 PM	40258
Zinc	0.031	0.0033	0.010		mg/L	1	9/13/2018 9:45:58 PM	40258
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.015	0.00041	0.0010	*	mg/L	1	9/12/2018 6:17:49 PM	40258
Lead	0.0062	0.00023	0.00050		mg/L	1	9/12/2018 6:17:49 PM	40258
Selenium	ND	0.00098	0.0010		mg/L	1	9/12/2018 6:17:49 PM	40258
Uranium	0.00028	0.000068	0.00050	J	mg/L	1	9/12/2018 6:17:49 PM	40258
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000052	0.000038	0.00020	J	mg/L	1	9/21/2018 4:20:56 PM	40500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	8.4	5.8	10	J	µg/L	1	9/13/2018 8:55:02 PM	40263
Acenaphthylene	ND	6.2	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Aniline	ND	6.2	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Anthracene	ND	5.7	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Azobenzene	ND	6.7	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzoic acid	ND	6.3	20		µg/L	1	9/13/2018 8:55:02 PM	40263
Benzyl alcohol	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Carbazole	8.9	6.3	10	J	µg/L	1	9/13/2018 8:55:02 PM	40263
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4-Chloroaniline	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2-Chlorophenol	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Chrysene	ND	6.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Dibenzofuran	ND	6.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Diethyl phthalate	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP12
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/5/2018 10:45:00 AM
Lab ID: 1809375-002G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Fluoranthene	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Fluorene	11	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Hexachloroethane	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Isophorone	ND	6.2	10		µg/L	1	9/13/2018 8:55:02 PM	40263
1-Methylnaphthalene	210	7.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2-Methylnaphthalene	350	13	20		µg/L	2	9/18/2018 6:08:06 PM	40263
2-Methylphenol	ND	6.3	10		µg/L	1	9/13/2018 8:55:02 PM	40263
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/13/2018 8:55:02 PM	40263
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Naphthalene	380	10	20		µg/L	2	9/18/2018 6:08:06 PM	40263
2-Nitroaniline	ND	5.9	10		µg/L	1	9/13/2018 8:55:02 PM	40263
3-Nitroaniline	ND	6.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4-Nitroaniline	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Nitrobenzene	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2-Nitrophenol	ND	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
4-Nitrophenol	ND	5.6	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Pentachlorophenol	ND	5.3	20		µg/L	1	9/13/2018 8:55:02 PM	40263
Phenanthrene	7.5	6.0	10	J	µg/L	1	9/13/2018 8:55:02 PM	40263
Phenol	42	6.0	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Pyrene	ND	6.5	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Pyridine	ND	5.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/13/2018 8:55:02 PM	40263
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/13/2018 8:55:02 PM	40263
Surr: 2-Fluorophenol	35.5	0	15-74.1		%Rec	1	9/13/2018 8:55:02 PM	40263
Surr: Phenol-d5	33.3	0	15-59.8		%Rec	1	9/13/2018 8:55:02 PM	40263
Surr: 2,4,6-Tribromophenol	75.4	0	22.1-112		%Rec	1	9/13/2018 8:55:02 PM	40263
Surr: Nitrobenzene-d5	57.2	0	33.2-94		%Rec	1	9/13/2018 8:55:02 PM	40263
Surr: 2-Fluorobiphenyl	63.3	0	34-90.9		%Rec	1	9/13/2018 8:55:02 PM	40263
Surr: 4-Terphenyl-d14	96.4	0	15-149		%Rec	1	9/13/2018 8:55:02 PM	40263

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809375-003A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Toluene	ND	0.17	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Naphthalene	ND	0.29	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Acetone	ND	0.79	10		µg/L	1	9/12/2018 2:13:46 PM	W54111
Bromobenzene	ND	0.32	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Bromoform	ND	0.32	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Bromomethane	ND	0.26	3.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
2-Butanone	ND	1.3	10		µg/L	1	9/12/2018 2:13:46 PM	W54111
Carbon disulfide	ND	0.39	10		µg/L	1	9/12/2018 2:13:46 PM	W54111
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Chloroethane	ND	0.16	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Chloroform	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Chloromethane	ND	0.29	3.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Dibromomethane	ND	0.32	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809375-003A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
2-Hexanone	ND	0.91	10		µg/L	1	9/12/2018 2:13:46 PM	W54111
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/12/2018 2:13:46 PM	W54111
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Styrene	ND	0.25	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/12/2018 2:13:46 PM	W54111
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/12/2018 2:13:46 PM	W54111
Surr: 1,2-Dichloroethane-d4	98.8	0	70-130		%Rec	1	9/12/2018 2:13:46 PM	W54111
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	9/12/2018 2:13:46 PM	W54111
Surr: Dibromofluoromethane	97.0	0	70-130		%Rec	1	9/12/2018 2:13:46 PM	W54111
Surr: Toluene-d8	100	0	70-130		%Rec	1	9/12/2018 2:13:46 PM	W54111

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0014	0.0020	0.002000	0	69.5	50	150			J
Calcium	0.50	1.0	0.5000	0	99.6	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Copper	0.0045	0.0060	0.006000	0	74.8	50	150			J
Magnesium	0.48	1.0	0.5000	0	95.7	50	150			J
Manganese	0.0019	0.0020	0.002000	0	96.0	50	150			J
Potassium	0.52	1.0	0.5000	0	104	50	150			J
Sodium	0.34	1.0	0.5000	0	68.8	50	150			J
Zinc	0.0065	0.010	0.005000	0	130	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54392**	RunNo: **54392**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	49	1.0	50.00	0	98.2	85	115			
Chromium	0.45	0.0060	0.5000	0	90.1	85	115			
Copper	0.47	0.0060	0.5000	0	94.3	85	115			
Magnesium	50	1.0	50.00	0	99.6	85	115			
Manganese	0.46	0.0020	0.5000	0	92.7	85	115			
Potassium	49	1.0	50.00	0	98.5	85	115			
Sodium	48	1.0	50.00	0	95.4	85	115			
Zinc	0.44	0.010	0.5000	0	88.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B54547**	RunNo:	**54547**					
Prep Date:		Analysis Date:	**10/1/2018**	SeqNo:	**1808510**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Iron	ND	0.020								
Silver	ND	0.0050								

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54547**	RunNo:	**54547**					
Prep Date:		Analysis Date:	**10/1/2018**	SeqNo:	**1808511**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Iron	0.023	0.020	0.02000	0	116	50	150			
Silver	0.0049	0.0050	0.005000	0	98.4	50	150			J

Sample ID	**LCS-B**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54547**	RunNo:	**54547**					
Prep Date:		Analysis Date:	**10/1/2018**	SeqNo:	**1808512**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Silver	0.098	0.0050	0.1000	0	97.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40258**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789752** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40258**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789753** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Cadmium	0.0012	0.0020	0.002000	0	59.5	50	150			J
Chromium	0.0049	0.0060	0.006000	0	81.8	50	150			J
Iron	0.023	0.020	0.02000	0	115	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0054	0.0050	0.005000	0	109	50	150			
Zinc	0.0075	0.010	0.005000	0	150	50	150			J

Sample ID	**LCS-40258**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40258**	RunNo:	**54126**
Prep Date:	**9/10/2018**	Analysis Date:	**9/13/2018**	SeqNo:	**1789754** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.52	0.0020	0.5000	0	105	85	115			
Chromium	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID	**MB-40258**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40258**	RunNo:	**54165**
Prep Date:	**9/10/2018**	Analysis Date:	**9/14/2018**	SeqNo:	**1790766** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-40258**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40258**		RunNo:	**54165**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/14/2018**		SeqNo:	**1790803**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.0055	0.0060	0.006000	0	91.5	50	150			J	

Sample ID	**LCS-40258**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40258**		RunNo:	**54165**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/14/2018**		SeqNo:	**1790804**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Copper	0.48	0.0060	0.5000	0	96.6	85	115				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B54342**	RunNo:	**54342**					
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798638**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B54342**	RunNo:	**54342**					
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798639**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	99.7	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.0	50	150			J
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B54342**	RunNo:	**54342**					
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798640**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40258**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID: **40258**	RunNo: **54114**
Prep Date:	**9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40258**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**BatchQC**	Batch ID: **40258**	RunNo: **54114**
Prep Date:	**9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788672** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	0.00098	0.0010	0.001000	0	98.5	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	105	50	150			

Sample ID	**MSLCS-40258**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**LCSW**	Batch ID: **40258**	RunNo: **54114**
Prep Date:	**9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1788673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			
Lead	0.012	0.00050	0.01250	0	96.9	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			
Uranium	0.013	0.00050	0.01250	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40500**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40500**	RunNo:	**54328**					
Prep Date:	**9/21/2018**	Analysis Date:	**9/21/2018**	SeqNo:	**1798220**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40500**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40500**	RunNo:	**54328**					
Prep Date:	**9/21/2018**	Analysis Date:	**9/21/2018**	SeqNo:	**1798221**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.9	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54024**	RunNo: **54024**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784582** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54024**	RunNo: **54024**
Prep Date:	Analysis Date: **9/7/2018**	SeqNo: **1784583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Chloride	4.9	0.50	5.000	0	97.4	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	99.3	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.2	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40238**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40238**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785820**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40238**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40238**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785822**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-40234**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	107	70	130			
Surr: DNOP	0.50		0.5000		99.5	76.7	135			

Sample ID **MB-40234**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40234**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/10/2018**	SeqNo: **1785580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.98		1.000		98.1	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.1	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788222** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.59	0.050	0.5000	0	118	79.5	127			
Surr: BFB	21		20.00		105	69.3	150			

Sample ID **1809375-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-36**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788224** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	54	2.5	25.00	25.04	114	52.5	149			
Surr: BFB	1200		1000		117	69.3	150			

Sample ID **1809375-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-36**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788225** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	49	2.5	25.00	25.04	97.8	52.5	149	8.11	20	
Surr: BFB	1100		1000		113	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **lcs-40263**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790019** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.3	55.1	104			
4-Chloro-3-methylphenol	140	10	200.0	0	69.7	57	115			
2-Chlorophenol	130	10	200.0	0	64.6	43.4	112			
1,4-Dichlorobenzene	57	10	100.0	0	56.9	38	95.2			
2,4-Dinitrotoluene	61	10	100.0	0	60.8	55.1	96.7			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.0	55	112			
4-Nitrophenol	100	10	200.0	0	51.8	16.6	93			
Pentachlorophenol	140	20	200.0	0	69.4	43.2	104			
Phenol	79	10	200.0	0	39.7	21.3	85.7			
Pyrene	80	10	100.0	0	80.4	64.9	105			
1,2,4-Trichlorobenzene	66	10	100.0	0	65.6	42.6	107			
Surr: 2-Fluorophenol	97		200.0		48.7	15	74.1			
Surr: Phenol-d5	85		200.0		42.4	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		67.5	22.1	112			
Surr: Nitrobenzene-d5	62		100.0		61.9	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		62.0	34	90.9			
Surr: 4-Terphenyl-d14	100		100.0		99.6	15	149			

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.1	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**	
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809375**
04-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40263**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40263**	RunNo: **54136**	
Prep Date: **9/11/2018**	Analysis Date: **9/13/2018**	SeqNo: **1790021**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	80		200.0		39.9	15	74.1			
Surr: Phenol-d5	82		200.0		41.1	15	59.8			
Surr: 2,4,6-Tribromophenol	110		200.0		56.2	22.1	112			
Surr: Nitrobenzene-d5	73		100.0		73.3	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		70.4	34	90.9			
Surr: 4-Terphenyl-d14	95		100.0		95.4	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: **1809375** | RcptNo: 1

Received By: **Michelle Garcia** **9/7/2018 8:50:00 AM** Michelle Garcia

Completed By: **Ashley Gallegos** **9/7/2018 9:37:15 AM**

Reviewed By: MJ 09/07/18

Labeled by: ENM 9/7/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 6
(<2 or >12 unless noted)
Adjusted? NO
Checked by: ENM 9/7/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809375	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/5/18	1045	H_2O	MKTF-36	40ml VOA-5	HCl	-001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X												
				1 Liter 2 Amber	Neat												X						
				250 ml Amber-1	Neat				X														
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/6/18	0700			09/07/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☑ Yes ☐ No
Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809375	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/5/18	—	H_2O	DUP 12	40ml VOA-5	HCl	-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
9/5/18	—	H_2O	TRIP BLANK	40 mL VOA 3	HCl	-003										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/6/18	0700			09/07/18	0850
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**
Courier

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 23, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater and Pond Sampling OrderNo.: 1809409

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 17 sample(s) on 9/7/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/12/2018 3:08:40 AM	AN5406
Surr: BFB	86.4	0	69.3-150		%Rec	1	9/12/2018 3:08:40 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Acetone	2.5	0.79	10	J	µg/L	1	9/13/2018 7:46:45 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 7:46:45 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 7:46:45 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 7:46:45 PM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 7:46:45 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 7:46:45 PM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 7:46:45 PM	B54139
Surr: 1,2-Dichloroethane-d4	91.7	0	70-130		%Rec	1	9/13/2018 7:46:45 PM	B54139
Surr: 4-Bromofluorobenzene	95.8	0	70-130		%Rec	1	9/13/2018 7:46:45 PM	B54139
Surr: Dibromofluoromethane	88.8	0	70-130		%Rec	1	9/13/2018 7:46:45 PM	B54139
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	9/13/2018 7:46:45 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/12/2018 6:09:05 AM	40235
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2018 6:09:05 AM	40235
Surr: DNOP	109	0	76.7-135		%Rec	1	9/12/2018 6:09:05 AM	40235

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	9/10/2018 3:11:29 PM	R54060
Chloride	0.12	0.029	0.50	J	mg/L	1	9/10/2018 3:11:29 PM	R54060
Bromide	ND	0.027	0.10		mg/L	1	9/10/2018 3:11:29 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	9/10/2018 3:11:29 PM	R54060
Sulfate	ND	0.21	0.50		mg/L	1	9/10/2018 3:11:29 PM	R54060
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	9/26/2018 7:28:50 PM	R54492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/17/2018 2:10:37 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:10:37 PM	40361
Chromium	ND	0.0018	0.0060		mg/L	1	9/17/2018 2:10:37 PM	40361
Copper	ND	0.0041	0.0060		mg/L	1	9/20/2018 6:47:08 PM	40361
Iron	ND	0.010	0.020		mg/L	1	9/17/2018 2:10:37 PM	40361
Manganese	ND	0.0011	0.0020		mg/L	1	9/17/2018 2:10:37 PM	40361
Silver	ND	0.0012	0.0050		mg/L	1	9/17/2018 2:10:37 PM	40361
Zinc	ND	0.0033	0.010		mg/L	1	9/17/2018 2:10:37 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/18/2018 2:23:21 PM	40361
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:23:21 PM	40361
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 2:23:21 PM	40361
Uranium	ND	0.000068	0.00050		mg/L	1	9/18/2018 2:23:21 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	10/2/2018 4:26:00 PM	40731

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:10:00 AM
Lab ID: 1809409-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/2/2018 10:02:44 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:02:44 PM	B54598
Calcium	ND	0.078	1.0		mg/L	1	10/2/2018 10:02:44 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:02:44 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:02:44 PM	B54598
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 10:02:44 PM	B54598
Magnesium	ND	0.25	1.0		mg/L	1	10/2/2018 10:02:44 PM	B54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 10:02:44 PM	B54598
Potassium	0.13	0.11	1.0	J	mg/L	1	10/2/2018 10:02:44 PM	B54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 10:02:44 PM	B54598
Sodium	0.52	0.16	1.0	J	mg/L	1	10/3/2018 6:11:32 PM	A54626
Zinc	0.0083	0.0021	0.010	J	mg/L	1	10/2/2018 10:02:44 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/21/2018 2:59:36 PM	C54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 2:59:36 PM	C54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 2:59:36 PM	C54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 2:59:36 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000095	0.000038	0.00020	J	mg/L	1	9/28/2018 10:14:54 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/12/2018 3:32:13 AM	AN5406
Surr: BFB	88.4	0	69.3-150		%Rec	1	9/12/2018 3:32:13 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Acetone	6.7	0.79	10	J	µg/L	1	9/13/2018 8:15:49 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 8:15:49 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 8:15:49 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 8:15:49 PM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 8:15:49 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 8:15:49 PM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 8:15:49 PM	B54139
Surr: 1,2-Dichloroethane-d4	97.5	0	70-130		%Rec	1	9/13/2018 8:15:49 PM	B54139
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/13/2018 8:15:49 PM	B54139
Surr: Dibromofluoromethane	96.2	0	70-130		%Rec	1	9/13/2018 8:15:49 PM	B54139
Surr: Toluene-d8	101	0	70-130		%Rec	1	9/13/2018 8:15:49 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/12/2018 7:22:21 AM	40235
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2018 7:22:21 AM	40235
Surr: DNOP	109	0	76.7-135		%Rec	1	9/12/2018 7:22:21 AM	40235

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.030	0.10		mg/L	1	9/10/2018 4:02:57 PM	R54060
Chloride	0.19	0.029	0.50	J	mg/L	1	9/10/2018 4:02:57 PM	R54060
Bromide	ND	0.027	0.10		mg/L	1	9/10/2018 4:02:57 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	9/10/2018 4:02:57 PM	R54060
Sulfate	ND	0.21	0.50		mg/L	1	9/10/2018 4:02:57 PM	R54060
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	9/26/2018 7:41:42 PM	R54492

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	ND	0.0010	0.0020		mg/L	1	9/17/2018 2:23:15 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:23:15 PM	40361
Chromium	ND	0.0018	0.0060		mg/L	1	9/17/2018 2:23:15 PM	40361
Copper	0.0085	0.0041	0.0060		mg/L	1	9/20/2018 6:52:59 PM	40361
Iron	ND	0.010	0.020		mg/L	1	9/17/2018 2:23:15 PM	40361
Manganese	ND	0.0011	0.0020		mg/L	1	9/17/2018 2:23:15 PM	40361
Silver	ND	0.0012	0.0050		mg/L	1	9/17/2018 2:23:15 PM	40361
Zinc	ND	0.0033	0.010		mg/L	1	9/17/2018 2:23:15 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/18/2018 2:25:38 PM	40361
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:25:38 PM	40361
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 2:25:38 PM	40361
Uranium	ND	0.000068	0.00050		mg/L	1	9/18/2018 2:25:38 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000060	0.000038	0.00020	J	mg/L	1	9/28/2018 10:17:08 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EB12
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:25:00 AM
Lab ID: 1809409-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/2/2018 10:07:11 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:07:11 PM	B54598
Calcium	ND	0.078	1.0		mg/L	1	10/2/2018 10:07:11 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:07:11 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:07:11 PM	B54598
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 10:07:11 PM	B54598
Magnesium	ND	0.25	1.0		mg/L	1	10/2/2018 10:07:11 PM	B54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 10:07:11 PM	B54598
Potassium	ND	0.11	1.0		mg/L	1	10/2/2018 10:07:11 PM	B54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 10:07:11 PM	B54598
Sodium	0.72	0.16	1.0	J	mg/L	1	10/3/2018 6:13:46 PM	A54626
Zinc	0.0071	0.0021	0.010	J	mg/L	1	10/2/2018 10:07:11 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/21/2018 3:11:33 PM	C54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 3:11:33 PM	C54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 3:11:33 PM	C54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 3:11:33 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000056	0.000038	0.00020	J	mg/L	1	9/28/2018 10:19:23 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/12/2018 3:55:39 AM	AN5406
Surr: BFB	94.6	0	69.3-150		%Rec	1	9/12/2018 3:55:39 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Acetone	1.8	0.79	10	J	µg/L	1	9/13/2018 8:44:49 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 8:44:49 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 8:44:49 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 8:44:49 PM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 8:44:49 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 8:44:49 PM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 8:44:49 PM	B54139
Surr: 1,2-Dichloroethane-d4	90.4	0	70-130		%Rec	1	9/13/2018 8:44:49 PM	B54139
Surr: 4-Bromofluorobenzene	98.7	0	70-130		%Rec	1	9/13/2018 8:44:49 PM	B54139
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	9/13/2018 8:44:49 PM	B54139
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	9/13/2018 8:44:49 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.99	0.63	1.0	J	mg/L	1	9/12/2018 7:46:34 AM	40235
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2018 7:46:34 AM	40235
Surr: DNOP	111	0	76.7-135		%Rec	1	9/12/2018 7:46:34 AM	40235

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.47	0.15	0.50	J	mg/L	5	9/10/2018 4:28:40 PM	R54060
Chloride	1900	36	100		mg/L	200	9/25/2018 12:08:21 AM	A54385
Bromide	3.7	0.13	0.50		mg/L	5	9/10/2018 4:28:40 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 4:28:40 PM	R54060
Sulfate	170	1.0	2.5		mg/L	5	9/10/2018 4:28:40 PM	R54060
Nitrate+Nitrite as N	23	0.55	2.0	*	mg/L	10	9/25/2018 11:50:45 PM	R54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.091	0.0010	0.0020		mg/L	1	9/17/2018 2:34:10 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:34:10 PM	40361
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	9/17/2018 2:34:10 PM	40361
Copper	0.0072	0.0041	0.0060		mg/L	1	9/20/2018 7:00:41 PM	40361
Iron	0.86	0.010	0.020	*	mg/L	1	9/17/2018 2:34:10 PM	40361
Manganese	0.027	0.0011	0.0020		mg/L	1	9/17/2018 2:34:10 PM	40361
Silver	0.0016	0.0012	0.0050	J	mg/L	1	9/17/2018 2:34:10 PM	40361
Zinc	0.016	0.0033	0.010		mg/L	1	9/17/2018 2:34:10 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0033	0.00041	0.0010		mg/L	1	9/18/2018 2:30:15 PM	40361
Lead	0.00086	0.00023	0.00050		mg/L	1	9/18/2018 2:30:15 PM	40361
Selenium	0.0066	0.00098	0.0010		mg/L	1	9/18/2018 2:30:15 PM	40361
Uranium	0.045	0.00034	0.0025	*	mg/L	5	9/19/2018 1:31:56 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00017	0.000038	0.00020	J	mg/L	1	9/28/2018 10:21:38 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: STP-1-NW
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 9:50:00 AM
Lab ID: 1809409-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.074	0.00099	0.0020		mg/L	1	10/2/2018 10:11:36 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:11:36 PM	B54598
Calcium	55	0.078	1.0		mg/L	1	10/2/2018 10:11:36 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:11:36 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:11:36 PM	B54598
Iron	0.027	0.016	0.020		mg/L	1	10/2/2018 10:11:36 PM	B54598
Magnesium	7.5	0.25	1.0		mg/L	1	10/2/2018 10:11:36 PM	B54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 10:11:36 PM	B54598
Potassium	4.3	0.11	1.0		mg/L	1	10/2/2018 10:11:36 PM	B54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 10:11:36 PM	B54598
Sodium	1200	3.3	20		mg/L	20	10/3/2018 6:15:59 PM	A54626
Zinc	0.011	0.0021	0.010		mg/L	1	10/2/2018 10:11:36 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0033	0.0021	0.0050	J	mg/L	5	9/21/2018 3:16:19 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:16:19 PM	C54342
Selenium	0.0071	0.0038	0.0050		mg/L	5	9/21/2018 3:16:19 PM	C54342
Uranium	0.044	0.00048	0.0025	*	mg/L	5	9/21/2018 3:16:19 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/28/2018 10:23:54 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.71	0.024	0.050		mg/L	1	9/12/2018 4:19:07 AM	AN5406
Surr: BFB	216	0	69.3-150	S	%Rec	1	9/12/2018 4:19:07 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	110	1.7	10		µg/L	10	9/14/2018 12:11:10 AM	B54139
Toluene	0.80	0.17	1.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
Ethylbenzene	9.6	0.22	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Methyl tert-butyl ether (MTBE)	250	3.2	10		µg/L	10	9/14/2018 12:11:10 AM	B54139
1,2,4-Trimethylbenzene	4.5	0.25	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2-Dichloroethane (EDC)	0.40	0.40	1.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Naphthalene	1.3	0.29	2.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
1-Methylnaphthalene	15	0.34	4.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Acetone	43	0.79	10		µg/L	1	9/13/2018 9:43:34 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 9:43:34 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 9:43:34 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1-Dichloroethane	1.0	0.40	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 9:43:34 PM	B54139
Isopropylbenzene	1.0	0.22	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
4-Isopropyltoluene	0.35	0.24	1.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
4-Methyl-2-pentanone	1.5	0.45	10	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
n-Butylbenzene	0.27	0.25	3.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
n-Propylbenzene	1.0	0.24	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
sec-Butylbenzene	0.22	0.20	1.0	J	µg/L	1	9/13/2018 9:43:34 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 9:43:34 PM	B54139
Xylenes, Total	5.0	0.64	1.5		µg/L	1	9/13/2018 9:43:34 PM	B54139
Surr: 1,2-Dichloroethane-d4	86.6	0	70-130		%Rec	1	9/13/2018 9:43:34 PM	B54139
Surr: 4-Bromofluorobenzene	91.2	0	70-130		%Rec	1	9/13/2018 9:43:34 PM	B54139
Surr: Dibromofluoromethane	89.9	0	70-130		%Rec	1	9/13/2018 9:43:34 PM	B54139
Surr: Toluene-d8	96.2	0	70-130		%Rec	1	9/13/2018 9:43:34 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	9.8	0.63	1.0		mg/L	1	9/12/2018 8:10:59 AM	40235
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2018 8:10:59 AM	40235
Surr: DNOP	116	0	76.7-135		%Rec	1	9/12/2018 8:10:59 AM	40235

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.9	0.15	0.50		mg/L	5	9/10/2018 5:20:07 PM	R54060
Chloride	1400	36	100		mg/L	200	9/25/2018 12:21:13 AM	A54385
Bromide	4.4	0.13	0.50		mg/L	5	9/10/2018 5:20:07 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 5:20:07 PM	R54060
Sulfate	4.8	1.0	2.5		mg/L	5	9/10/2018 5:20:07 PM	R54060
Nitrate+Nitrite as N	ND	0.55	2.0		mg/L	10	9/26/2018 12:03:10 AM	R54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.3	0.0050	0.010		mg/L	5	9/17/2018 2:40:12 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:38:14 PM	40361
Chromium	ND	0.0018	0.0060		mg/L	1	9/17/2018 2:38:14 PM	40361
Copper	0.013	0.0041	0.0060		mg/L	1	9/20/2018 7:02:35 PM	40361
Iron	1.8	0.051	0.10	*	mg/L	5	9/17/2018 2:40:12 PM	40361
Manganese	1.9	0.0055	0.010	*	mg/L	5	9/17/2018 2:40:12 PM	40361
Silver	0.0043	0.0012	0.0050	J	mg/L	1	9/17/2018 2:38:14 PM	40361
Zinc	0.041	0.0033	0.010		mg/L	1	9/17/2018 2:38:14 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0091	0.0021	0.0050		mg/L	5	9/18/2018 2:32:33 PM	40361
Lead	0.0091	0.0011	0.0025		mg/L	5	9/18/2018 2:32:33 PM	40361
Selenium	ND	0.0049	0.0050		mg/L	5	9/18/2018 2:32:33 PM	40361
Uranium	0.029	0.00034	0.0025		mg/L	5	9/18/2018 2:32:33 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 10:30:48 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	1.1	0.0099	0.020		mg/L	10	10/2/2018 10:17:45 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:15:45 PM	B54598
Calcium	160	0.78	10		mg/L	10	10/2/2018 10:17:45 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:15:45 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:15:45 PM	B54598
Iron	0.88	0.016	0.020	*	mg/L	1	10/2/2018 10:15:45 PM	B54598
Magnesium	31	0.25	1.0		mg/L	1	10/2/2018 10:15:45 PM	B54598
Manganese	1.5	0.0039	0.020	*	mg/L	10	10/2/2018 10:17:45 PM	B54598
Potassium	4.0	0.11	1.0		mg/L	1	10/2/2018 10:15:45 PM	B54598
Silver	0.0042	0.0018	0.0050	J	mg/L	1	10/2/2018 10:15:45 PM	B54598
Sodium	1200	3.3	20		mg/L	20	10/3/2018 6:17:59 PM	A54626
Zinc	0.035	0.0021	0.010		mg/L	1	10/2/2018 10:15:45 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0080	0.0021	0.0050		mg/L	5	9/21/2018 3:18:42 PM	C54342
Lead	0.0038	0.00087	0.0025		mg/L	5	9/21/2018 3:18:42 PM	C54342
Selenium	ND	0.0038	0.0050		mg/L	5	9/21/2018 3:18:42 PM	C54342
Uranium	0.041	0.00048	0.0025	*	mg/L	5	9/21/2018 3:18:42 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 10:33:05 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/11/2018 2:58:01 AM	40238

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Aniline	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Anthracene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Azobenzene	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Benzoic acid	34	32	100	J	µg/L	1	9/20/2018 7:20:45 PM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Carbazole	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Chrysene	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OAPIS-1
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 11:00:00 AM
Lab ID: 1809409-004G
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Fluoranthene	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Fluorene	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Isophorone	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
3+4-Methylphenol	ND	27	50		µg/L	1	9/20/2018 7:20:45 PM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/20/2018 7:20:45 PM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Naphthalene	ND	25	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
3-Nitroaniline	ND	34	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/20/2018 7:20:45 PM	40294
Phenanthrene	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Phenol	ND	30	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Pyrene	ND	33	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Pyridine	ND	27	50		µg/L	1	9/20/2018 7:20:45 PM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/20/2018 7:20:45 PM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/20/2018 7:20:45 PM	40294
Surr: 2-Fluorophenol	38.7	0	15-74.1		%Rec	1	9/20/2018 7:20:45 PM	40294
Surr: Phenol-d5	33.5	0	15-59.8		%Rec	1	9/20/2018 7:20:45 PM	40294
Surr: 2,4,6-Tribromophenol	72.6	0	22.1-112		%Rec	1	9/20/2018 7:20:45 PM	40294
Surr: Nitrobenzene-d5	55.3	0	33.2-94		%Rec	1	9/20/2018 7:20:45 PM	40294
Surr: 2-Fluorobiphenyl	58.1	0	34-90.9		%Rec	1	9/20/2018 7:20:45 PM	40294
Surr: 4-Terphenyl-d14	102	0	15-149		%Rec	1	9/20/2018 7:20:45 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/12/2018 4:42:35 AM	AN5406
Surr: BFB	89.5	0	69.3-150		%Rec	1	9/12/2018 4:42:35 AM	AN5406
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Acetone	ND	0.79	10		µg/L	1	9/13/2018 9:13:59 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 9:13:59 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 9:13:59 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 9:13:59 PM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 9:13:59 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 9:13:59 PM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 9:13:59 PM	B54139
Surr: 1,2-Dichloroethane-d4	95.9	0	70-130		%Rec	1	9/13/2018 9:13:59 PM	B54139
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	1	9/13/2018 9:13:59 PM	B54139
Surr: Dibromofluoromethane	92.2	0	70-130		%Rec	1	9/13/2018 9:13:59 PM	B54139
Surr: Toluene-d8	99.6	0	70-130		%Rec	1	9/13/2018 9:13:59 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	0.96	0.63	1.0	J	mg/L	1	9/12/2018 9:26:03 AM	40235
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/12/2018 9:26:03 AM	40235
Surr: DNOP	98.5	0	76.7-135		%Rec	1	9/12/2018 9:26:03 AM	40235

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.44	0.15	0.50	J	mg/L	5	9/10/2018 5:45:49 PM	R54060
Chloride	1900	36	100		mg/L	200	9/25/2018 12:34:05 AM	A54385
Bromide	3.8	0.13	0.50		mg/L	5	9/10/2018 5:45:49 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 5:45:49 PM	R54060
Sulfate	170	1.0	2.5		mg/L	5	9/10/2018 5:45:49 PM	R54060
Nitrate+Nitrite as N	25	0.55	2.0	*	mg/L	10	9/26/2018 12:15:35 AM	R54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.087	0.0010	0.0020		mg/L	1	9/17/2018 2:42:22 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:42:22 PM	40361
Chromium	ND	0.0018	0.0060		mg/L	1	9/17/2018 2:42:22 PM	40361
Copper	0.0058	0.0041	0.0060	J	mg/L	1	9/20/2018 7:04:27 PM	40361
Iron	0.75	0.010	0.020	*	mg/L	1	9/17/2018 2:42:22 PM	40361
Manganese	0.022	0.0011	0.0020		mg/L	1	9/17/2018 2:42:22 PM	40361
Silver	0.0018	0.0012	0.0050	J	mg/L	1	9/17/2018 2:42:22 PM	40361
Zinc	0.016	0.0033	0.010		mg/L	1	9/17/2018 2:42:22 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0033	0.00041	0.0010		mg/L	1	9/18/2018 2:34:50 PM	40361
Lead	0.00060	0.00023	0.00050		mg/L	1	9/18/2018 2:34:50 PM	40361
Selenium	0.0068	0.00098	0.0010		mg/L	1	9/18/2018 2:34:50 PM	40361
Uranium	0.043	0.00034	0.0025	*	mg/L	5	9/19/2018 11:57:34 AM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	9/28/2018 10:35:22 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP13
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018
Lab ID: 1809409-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.076	0.00099	0.0020		mg/L	1	10/2/2018 10:26:28 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:26:28 PM	B54598
Calcium	54	0.078	1.0		mg/L	1	10/2/2018 10:26:28 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:26:28 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:26:28 PM	B54598
Iron	0.022	0.016	0.020		mg/L	1	10/2/2018 10:26:28 PM	B54598
Magnesium	7.4	0.25	1.0		mg/L	1	10/2/2018 10:26:28 PM	B54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 10:26:28 PM	B54598
Potassium	4.3	0.11	1.0		mg/L	1	10/2/2018 10:26:28 PM	B54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 10:26:28 PM	B54598
Sodium	1200	3.3	20		mg/L	20	10/3/2018 6:20:01 PM	A54626
Zinc	0.011	0.0021	0.010		mg/L	1	10/2/2018 10:26:28 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0031	0.0021	0.0050	J	mg/L	5	9/21/2018 3:21:04 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:21:04 PM	C54342
Selenium	0.0069	0.0038	0.0050		mg/L	5	9/21/2018 3:21:04 PM	C54342
Uranium	0.045	0.00048	0.0025	*	mg/L	5	9/21/2018 3:21:04 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/28/2018 10:37:40 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	1.2	0.35	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Toluene	ND	0.34	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2,4-Trimethylbenzene	0.53	0.51	1.0	J	µg/L	2	9/14/2018 1:09:13 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
2-Methylnaphthalene	0.60	0.48	4.0	J	µg/L	2	9/14/2018 1:09:13 AM	B54139
Acetone	110	1.6	10		µg/L	2	9/14/2018 1:09:13 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
2-Butanone	5.4	2.5	10	J	µg/L	2	9/14/2018 1:09:13 AM	B54139
Carbon disulfide	2.3	0.77	10	J	µg/L	2	9/14/2018 1:09:13 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 1:09:13 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 1:09:13 AM	B54139
Methylene Chloride	0.57	0.41	3.0	J	µg/L	2	9/14/2018 1:09:13 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 1:09:13 AM	B54139
Xylenes, Total	1.8	1.3	1.5		µg/L	2	9/14/2018 1:09:13 AM	B54139
Surr: 1,2-Dichloroethane-d4	92.9	0	70-130		%Rec	2	9/14/2018 1:09:13 AM	B54139
Surr: 4-Bromofluorobenzene	98.1	0	70-130		%Rec	2	9/14/2018 1:09:13 AM	B54139
Surr: Dibromofluoromethane	91.8	0	70-130		%Rec	2	9/14/2018 1:09:13 AM	B54139
Surr: Toluene-d8	101	0	70-130		%Rec	2	9/14/2018 1:09:13 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Aniline	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Anthracene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Azobenzene	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Benzoic acid	62	32	100	J	µg/L	1	9/20/2018 7:50:27 PM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Carbazole	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Chrysene	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Fluoranthene	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Fluorene	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Isophorone	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
3+4-Methylphenol	140	27	50		µg/L	1	9/20/2018 7:50:27 PM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/20/2018 7:50:27 PM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Naphthalene	ND	25	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
3-Nitroaniline	ND	34	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/20/2018 7:50:27 PM	40294
Phenanthrene	ND	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Phenol	120	30	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Pyrene	ND	33	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Pyridine	ND	27	50		µg/L	1	9/20/2018 7:50:27 PM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/20/2018 7:50:27 PM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/20/2018 7:50:27 PM	40294
Surr: 2-Fluorophenol	43.5	0	15-74.1		%Rec	1	9/20/2018 7:50:27 PM	40294
Surr: Phenol-d5	36.4	0	15-59.8		%Rec	1	9/20/2018 7:50:27 PM	40294
Surr: 2,4,6-Tribromophenol	74.7	0	22.1-112		%Rec	1	9/20/2018 7:50:27 PM	40294
Surr: Nitrobenzene-d5	61.3	0	33.2-94		%Rec	1	9/20/2018 7:50:27 PM	40294
Surr: 2-Fluorobiphenyl	66.1	0	34-90.9		%Rec	1	9/20/2018 7:50:27 PM	40294
Surr: 4-Terphenyl-d14	91.2	0	15-149		%Rec	1	9/20/2018 7:50:27 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	25	0.59	2.0	*	mg/L	20	9/10/2018 6:24:24 PM	R54060
Chloride	1700	36	100		mg/L	200	9/25/2018 12:46:56 AM	A54385
Bromide	1.2	0.13	0.50		mg/L	5	9/10/2018 6:11:32 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 6:11:32 PM	R54060
Sulfate	800	41	100		mg/L	200	9/25/2018 12:46:56 AM	A54385
Nitrate+Nitrite as N	ND	0.55	2.0		mg/L	10	9/26/2018 12:27:59 AM	R54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/17/2018 2:46:24 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:46:24 PM	40361
Chromium	0.0024	0.0018	0.0060	J	mg/L	1	9/17/2018 2:46:24 PM	40361
Copper	0.010	0.0041	0.0060		mg/L	1	9/20/2018 7:06:19 PM	40361
Iron	0.16	0.010	0.020		mg/L	1	9/17/2018 2:46:24 PM	40361
Manganese	0.22	0.0011	0.0020	*	mg/L	1	9/17/2018 2:46:24 PM	40361
Silver	0.0065	0.0012	0.0050		mg/L	1	9/17/2018 2:46:24 PM	40361
Zinc	0.0060	0.0033	0.010	J	mg/L	1	9/17/2018 2:46:24 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.011	0.0021	0.0050	*	mg/L	5	9/19/2018 12:02:13 PM	40361
Lead	ND	0.0011	0.0025		mg/L	5	9/19/2018 12:02:13 PM	40361
Selenium	0.0057	0.0049	0.0050		mg/L	5	9/19/2018 12:02:13 PM	40361
Uranium	0.0015	0.00034	0.0025	J	mg/L	5	9/19/2018 12:02:13 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000085	0.000038	0.00020	J	mg/L	1	9/28/2018 10:39:57 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 12:50:00 PM
Lab ID: 1809409-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.16	0.00099	0.0020		mg/L	1	10/2/2018 10:30:35 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:30:35 PM	B54598
Calcium	290	0.78	10		mg/L	10	10/2/2018 10:32:47 PM	B54598
Chromium	0.0016	0.0013	0.0060	J	mg/L	1	10/2/2018 10:30:35 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:30:35 PM	B54598
Iron	0.095	0.016	0.020		mg/L	1	10/2/2018 10:30:35 PM	B54598
Magnesium	82	0.25	1.0		mg/L	1	10/2/2018 10:30:35 PM	B54598
Manganese	0.22	0.00039	0.0020	*	mg/L	1	10/2/2018 10:30:35 PM	B54598
Potassium	240	1.1	10		mg/L	10	10/2/2018 10:32:47 PM	B54598
Silver	0.0068	0.0018	0.0050		mg/L	1	10/2/2018 10:30:35 PM	B54598
Sodium	1200	8.2	50		mg/L	50	10/11/2018 9:07:01 PM	A54839
Zinc	0.0066	0.0021	0.010	J	mg/L	1	10/2/2018 10:30:35 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0091	0.0021	0.0050		mg/L	5	9/21/2018 3:23:27 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:23:27 PM	C54342
Selenium	ND	0.0038	0.0050		mg/L	5	9/21/2018 3:23:27 PM	C54342
Uranium	0.0013	0.00048	0.0025	J	mg/L	5	9/21/2018 3:23:27 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00013	0.000038	0.00020	J	mg/L	1	9/28/2018 10:42:16 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	0.39	0.35	1.0	J	µg/L	2	9/14/2018 2:07:55 AM	B54139
Toluene	0.54	0.34	1.0	J	µg/L	2	9/14/2018 2:07:55 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2,4-Trimethylbenzene	ND	0.51	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
2-Methylnaphthalene	ND	0.48	4.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Acetone	65	1.6	10		µg/L	2	9/14/2018 2:07:55 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
2-Butanone	4.6	2.5	10	J	µg/L	2	9/14/2018 2:07:55 AM	B54139
Carbon disulfide	3.5	0.77	10	J	µg/L	2	9/14/2018 2:07:55 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 2:07:55 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 2:07:55 AM	B54139
Methylene Chloride	0.64	0.41	3.0	J	µg/L	2	9/14/2018 2:07:55 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 2:07:55 AM	B54139
Xylenes, Total	ND	1.3	1.5		µg/L	2	9/14/2018 2:07:55 AM	B54139
Surr: 1,2-Dichloroethane-d4	89.2	0	70-130		%Rec	2	9/14/2018 2:07:55 AM	B54139
Surr: 4-Bromofluorobenzene	94.6	0	70-130		%Rec	2	9/14/2018 2:07:55 AM	B54139
Surr: Dibromofluoromethane	86.5	0	70-130		%Rec	2	9/14/2018 2:07:55 AM	B54139
Surr: Toluene-d8	92.5	0	70-130		%Rec	2	9/14/2018 2:07:55 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Acenaphthylene	ND	62	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Aniline	ND	62	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Anthracene	ND	57	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Azobenzene	ND	67	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benz(a)anthracene	ND	53	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benzo(a)pyrene	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benzo(b)fluoranthene	ND	71	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benzo(g,h,i)perylene	ND	57	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benzo(k)fluoranthene	ND	64	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Benzoic acid	71	63	200	J	µg/L	1	9/20/2018 8:19:52 PM	40294
Benzyl alcohol	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Bis(2-chloroethoxy)methane	ND	61	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Bis(2-chloroethyl)ether	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Bis(2-chloroisopropyl)ether	ND	49	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Bis(2-ethylhexyl)phthalate	ND	81	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Bromophenyl phenyl ether	ND	69	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Butyl benzyl phthalate	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Carbazole	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Chloro-3-methylphenol	ND	56	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Chloroaniline	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Chloronaphthalene	ND	61	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Chlorophenol	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Chlorophenyl phenyl ether	ND	72	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Chrysene	ND	68	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Di-n-butyl phthalate	ND	68	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Di-n-octyl phthalate	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Dibenz(a,h)anthracene	ND	56	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Dibenzofuran	ND	69	100		µg/L	1	9/20/2018 8:19:52 PM	40294
1,2-Dichlorobenzene	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
1,3-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
1,4-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
3,3´-Dichlorobenzidine	ND	68	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Diethyl phthalate	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Dimethyl phthalate	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4-Dichlorophenol	ND	58	200		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4-Dimethylphenol	ND	59	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4,6-Dinitro-2-methylphenol	ND	54	200		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4-Dinitrophenol	ND	37	200		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4-Dinitrotoluene	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Fluoranthene	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Fluorene	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Hexachlorobenzene	ND	62	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Hexachlorobutadiene	ND	64	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Hexachlorocyclopentadiene	ND	39	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Hexachloroethane	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Indeno(1,2,3-cd)pyrene	ND	70	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Isophorone	ND	62	100		µg/L	1	9/20/2018 8:19:52 PM	40294
1-Methylnaphthalene	ND	70	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Methylnaphthalene	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Methylphenol	ND	63	100		µg/L	1	9/20/2018 8:19:52 PM	40294
3+4-Methylphenol	ND	54	100		µg/L	1	9/20/2018 8:19:52 PM	40294
N-Nitrosodi-n-propylamine	ND	61	100		µg/L	1	9/20/2018 8:19:52 PM	40294
N-Nitrosodimethylamine	ND	69	100		µg/L	1	9/20/2018 8:19:52 PM	40294
N-Nitrosodiphenylamine	ND	67	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Naphthalene	ND	50	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Nitroaniline	ND	59	100		µg/L	1	9/20/2018 8:19:52 PM	40294
3-Nitroaniline	ND	68	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Nitroaniline	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Nitrobenzene	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2-Nitrophenol	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
4-Nitrophenol	ND	56	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Pentachlorophenol	ND	53	200		µg/L	1	9/20/2018 8:19:52 PM	40294
Phenanthrene	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Phenol	ND	60	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Pyrene	ND	65	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Pyridine	ND	54	100		µg/L	1	9/20/2018 8:19:52 PM	40294
1,2,4-Trichlorobenzene	ND	64	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4,5-Trichlorophenol	ND	58	100		µg/L	1	9/20/2018 8:19:52 PM	40294
2,4,6-Trichlorophenol	ND	64	100		µg/L	1	9/20/2018 8:19:52 PM	40294
Surr: 2-Fluorophenol	46.8	0	15-74.1		%Rec	1	9/20/2018 8:19:52 PM	40294
Surr: Phenol-d5	41.1	0	15-59.8		%Rec	1	9/20/2018 8:19:52 PM	40294
Surr: 2,4,6-Tribromophenol	82.0	0	22.1-112		%Rec	1	9/20/2018 8:19:52 PM	40294
Surr: Nitrobenzene-d5	71.1	0	33.2-94		%Rec	1	9/20/2018 8:19:52 PM	40294
Surr: 2-Fluorobiphenyl	73.7	0	34-90.9		%Rec	1	9/20/2018 8:19:52 PM	40294
Surr: 4-Terphenyl-d14	97.6	0	15-149		%Rec	1	9/20/2018 8:19:52 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	31	0.59	2.0	*	mg/L	20	9/10/2018 6:50:06 PM	R54060
Chloride	1900	36	100		mg/L	200	9/25/2018 12:59:48 AM	A54385
Bromide	1.0	0.13	0.50		mg/L	5	9/10/2018 6:37:15 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 6:37:15 PM	R54060
Sulfate	890	41	100		mg/L	200	9/25/2018 12:59:48 AM	A54385
Nitrate+Nitrite as N	ND	0.55	2.0		mg/L	10	9/26/2018 1:17:39 AM	R54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.15	0.0010	0.0020		mg/L	1	9/17/2018 2:50:35 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 2:50:35 PM	40361
Chromium	0.0022	0.0018	0.0060	J	mg/L	1	9/17/2018 2:50:35 PM	40361
Copper	0.0075	0.0041	0.0060		mg/L	1	9/20/2018 7:08:24 PM	40361
Iron	0.18	0.010	0.020		mg/L	1	9/17/2018 2:50:35 PM	40361
Manganese	0.23	0.0011	0.0020	*	mg/L	1	9/17/2018 2:50:35 PM	40361
Silver	0.0069	0.0012	0.0050		mg/L	1	9/17/2018 2:50:35 PM	40361
Zinc	0.012	0.0033	0.010		mg/L	1	9/17/2018 2:50:35 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.013	0.0021	0.0050	*	mg/L	5	9/18/2018 2:44:04 PM	40361
Lead	ND	0.0011	0.0025		mg/L	5	9/18/2018 2:44:04 PM	40361
Selenium	0.0060	0.0049	0.0050		mg/L	5	9/18/2018 2:44:04 PM	40361
Uranium	0.0013	0.00034	0.0025	J	mg/L	5	9/19/2018 1:34:14 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/28/2018 10:44:28 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	10/2/2018 10:34:59 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:34:59 PM	B54598
Calcium	290	0.78	10		mg/L	10	10/2/2018 10:37:10 PM	B54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 10:34:59 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:34:59 PM	B54598
Iron	0.083	0.016	0.020		mg/L	1	10/2/2018 10:34:59 PM	B54598
Magnesium	91	0.25	1.0		mg/L	1	10/2/2018 10:34:59 PM	B54598
Manganese	0.22	0.00039	0.0020	*	mg/L	1	10/2/2018 10:34:59 PM	B54598
Potassium	300	1.1	10		mg/L	10	10/2/2018 10:37:10 PM	B54598
Silver	0.0071	0.0018	0.0050		mg/L	1	10/2/2018 10:34:59 PM	B54598
Sodium	1400	3.3	20		mg/L	20	10/3/2018 6:24:15 PM	A54626
Zinc	0.0054	0.0021	0.010	J	mg/L	1	10/2/2018 10:34:59 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.010	0.0021	0.0050	*	mg/L	5	9/21/2018 3:25:49 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:25:49 PM	C54342
Selenium	ND	0.0038	0.0050		mg/L	5	9/21/2018 3:25:49 PM	C54342
Uranium	0.0011	0.00048	0.0025	J	mg/L	5	9/21/2018 3:25:49 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00016	0.000038	0.00020	J	mg/L	1	9/28/2018 10:46:39 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 1:30:00 PM
Lab ID: 1809409-007F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	0.45	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
4,4´-DDE	ND	0.45	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
4,4´-DDT	ND	0.45	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Aldrin	ND	0.57	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
alpha-BHC	ND	0.52	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
beta-BHC	ND	0.49	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Chlordane	ND	9.5	10		µg/L	1	9/21/2018 12:58:15 PM	40330
delta-BHC	ND	0.51	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
Dieldrin	ND	0.48	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Endosulfan I	ND	0.38	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Endosulfan II	ND	0.40	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Endosulfan sulfate	ND	0.59	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
Endrin	ND	0.47	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Endrin aldehyde	ND	0.66	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
gamma-BHC	ND	0.50	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
Heptachlor	ND	0.55	0.75		µg/L	1	9/21/2018 12:58:15 PM	40330
Heptachlor epoxide	ND	0.48	0.50		µg/L	1	9/21/2018 12:58:15 PM	40330
Methoxychlor	ND	0.79	0.80		µg/L	1	9/21/2018 12:58:15 PM	40330
Toxaphene	ND	8.9	10		µg/L	1	9/21/2018 12:58:15 PM	40330
Surr: Decachlorobiphenyl	56.8	0	47.2-117		%Rec	1	9/21/2018 12:58:15 PM	40330
Surr: Tetrachloro-m-xylene	56.1	0	26.4-126		%Rec	1	9/21/2018 12:58:15 PM	40330

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Toluene	ND	0.34	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2,4-Trimethylbenzene	ND	0.51	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
2-Methylnaphthalene	ND	0.48	4.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Acetone	27	1.6	10		µg/L	2	9/14/2018 3:06:02 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
2-Butanone	3.3	2.5	10	J	µg/L	2	9/14/2018 3:06:02 AM	B54139
Carbon disulfide	5.2	0.77	10	J	µg/L	2	9/14/2018 3:06:02 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 3:06:02 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 3:06:02 AM	B54139
Methylene Chloride	0.54	0.41	3.0	J	µg/L	2	9/14/2018 3:06:02 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 3:06:02 AM	B54139
Xylenes, Total	ND	1.3	1.5		µg/L	2	9/14/2018 3:06:02 AM	B54139
Surr: 1,2-Dichloroethane-d4	92.5	0	70-130		%Rec	2	9/14/2018 3:06:02 AM	B54139
Surr: 4-Bromofluorobenzene	98.2	0	70-130		%Rec	2	9/14/2018 3:06:02 AM	B54139
Surr: Dibromofluoromethane	89.9	0	70-130		%Rec	2	9/14/2018 3:06:02 AM	B54139
Surr: Toluene-d8	92.7	0	70-130		%Rec	2	9/14/2018 3:06:02 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Aniline	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Anthracene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Azobenzene	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Benzoic acid	33	32	100	J	µg/L	1	9/20/2018 8:49:30 PM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Carbazole	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Chrysene	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Fluoranthene	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Fluorene	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Isophorone	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
3+4-Methylphenol	ND	27	50		µg/L	1	9/20/2018 8:49:30 PM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/20/2018 8:49:30 PM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Naphthalene	ND	25	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
3-Nitroaniline	ND	34	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/20/2018 8:49:30 PM	40294
Phenanthrene	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Phenol	ND	30	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Pyrene	ND	33	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Pyridine	ND	27	50		µg/L	1	9/20/2018 8:49:30 PM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/20/2018 8:49:30 PM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/20/2018 8:49:30 PM	40294
Surr: 2-Fluorophenol	41.7	0	15-74.1		%Rec	1	9/20/2018 8:49:30 PM	40294
Surr: Phenol-d5	36.6	0	15-59.8		%Rec	1	9/20/2018 8:49:30 PM	40294
Surr: 2,4,6-Tribromophenol	69.7	0	22.1-112		%Rec	1	9/20/2018 8:49:30 PM	40294
Surr: Nitrobenzene-d5	62.8	0	33.2-94		%Rec	1	9/20/2018 8:49:30 PM	40294
Surr: 2-Fluorobiphenyl	62.3	0	34-90.9		%Rec	1	9/20/2018 8:49:30 PM	40294
Surr: 4-Terphenyl-d14	86.6	0	15-149		%Rec	1	9/20/2018 8:49:30 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	28	0.59	2.0	*	mg/L	20	9/10/2018 7:15:51 PM	R54060
Chloride	2700	36	100		mg/L	200	9/25/2018 1:12:39 AM	A54385
Bromide	1.3	0.13	0.50		mg/L	5	9/10/2018 7:02:58 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 7:02:58 PM	R54060
Sulfate	1000	41	100		mg/L	200	9/25/2018 1:12:39 AM	A54385
Nitrate+Nitrite as N	ND	0.55	2.0		mg/L	10	9/26/2018 2:07:17 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/17/2018 3:01:26 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 3:01:26 PM	40361
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 3:50:40 PM	40361
Copper	0.0067	0.0041	0.0060		mg/L	1	9/20/2018 7:10:30 PM	40361
Iron	0.17	0.010	0.020		mg/L	1	9/17/2018 3:01:26 PM	40361
Manganese	0.21	0.0011	0.0020	*	mg/L	1	9/17/2018 3:01:26 PM	40361
Silver	0.0073	0.0012	0.0050		mg/L	1	9/17/2018 3:01:26 PM	40361
Zinc	ND	0.0033	0.010		mg/L	1	9/17/2018 3:01:26 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.014	0.0021	0.0050	*	mg/L	5	9/18/2018 2:46:22 PM	40361
Lead	ND	0.0011	0.0025		mg/L	5	9/18/2018 2:46:22 PM	40361
Selenium	0.0060	0.0049	0.0050		mg/L	5	9/18/2018 2:46:22 PM	40361
Uranium	0.0011	0.00034	0.0025	J	mg/L	5	9/19/2018 12:06:52 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00013	0.000038	0.00020	J	mg/L	1	9/28/2018 10:48:52 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 2:50:00 PM
Lab ID: 1809409-008E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	10/2/2018 10:39:23 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:39:23 PM	B54598
Calcium	290	0.78	10		mg/L	10	10/2/2018 10:41:38 PM	B54598
Chromium	0.0016	0.0013	0.0060	J	mg/L	1	10/2/2018 10:39:23 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:39:23 PM	B54598
Iron	0.088	0.016	0.020		mg/L	1	10/2/2018 10:39:23 PM	B54598
Magnesium	100	2.5	10		mg/L	10	10/2/2018 10:41:38 PM	B54598
Manganese	0.20	0.00039	0.0020	*	mg/L	1	10/2/2018 10:39:23 PM	B54598
Potassium	350	1.1	10		mg/L	10	10/2/2018 10:41:38 PM	B54598
Silver	0.0065	0.0018	0.0050		mg/L	1	10/2/2018 10:39:23 PM	B54598
Sodium	1800	3.3	20		mg/L	20	10/3/2018 6:26:28 PM	A54626
Zinc	0.0064	0.0021	0.010	J	mg/L	1	10/2/2018 10:39:23 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.012	0.0021	0.0050	*	mg/L	5	9/21/2018 3:28:12 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:28:12 PM	C54342
Selenium	ND	0.0038	0.0050		mg/L	5	9/21/2018 3:28:12 PM	C54342
Uranium	0.00092	0.00048	0.0025	J	mg/L	5	9/21/2018 3:28:12 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00012	0.000038	0.00020	J	mg/L	1	9/28/2018 10:51:05 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Toluene	ND	0.34	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2,4-Trimethylbenzene	ND	0.51	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
2-Methylnaphthalene	ND	0.48	4.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Acetone	5.2	1.6	10	J	µg/L	2	9/14/2018 3:35:27 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
2-Butanone	ND	2.5	10		µg/L	2	9/14/2018 3:35:27 AM	B54139
Carbon disulfide	1.7	0.77	10	J	µg/L	2	9/14/2018 3:35:27 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 3:35:27 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 3:35:27 AM	B54139
Methylene Chloride	0.50	0.41	3.0	J	µg/L	2	9/14/2018 3:35:27 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 3:35:27 AM	B54139
Xylenes, Total	ND	1.3	1.5		µg/L	2	9/14/2018 3:35:27 AM	B54139
Surr: 1,2-Dichloroethane-d4	95.3	0	70-130		%Rec	2	9/14/2018 3:35:27 AM	B54139
Surr: 4-Bromofluorobenzene	95.8	0	70-130		%Rec	2	9/14/2018 3:35:27 AM	B54139
Surr: Dibromofluoromethane	91.6	0	70-130		%Rec	2	9/14/2018 3:35:27 AM	B54139
Surr: Toluene-d8	99.8	0	70-130		%Rec	2	9/14/2018 3:35:27 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Acenaphthylene	ND	62	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Aniline	ND	62	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Anthracene	ND	57	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Azobenzene	ND	67	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benz(a)anthracene	ND	53	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benzo(a)pyrene	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benzo(b)fluoranthene	ND	71	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benzo(g,h,i)perylene	ND	57	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benzo(k)fluoranthene	ND	64	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Benzoic acid	69	63	200	J	µg/L	1	9/20/2018 9:19:11 PM	40294
Benzyl alcohol	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Bis(2-chloroethoxy)methane	ND	61	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Bis(2-chloroethyl)ether	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Bis(2-chloroisopropyl)ether	ND	49	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Bis(2-ethylhexyl)phthalate	ND	81	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Bromophenyl phenyl ether	ND	69	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Butyl benzyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Carbazole	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Chloro-3-methylphenol	ND	56	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Chloroaniline	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Chloronaphthalene	ND	61	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Chlorophenol	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Chlorophenyl phenyl ether	ND	72	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Chrysene	ND	68	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Di-n-butyl phthalate	ND	68	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Di-n-octyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Dibenz(a,h)anthracene	ND	56	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Dibenzofuran	ND	69	100		µg/L	1	9/20/2018 9:19:11 PM	40294
1,2-Dichlorobenzene	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
1,3-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
1,4-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
3,3´-Dichlorobenzidine	ND	68	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Diethyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Dimethyl phthalate	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4-Dichlorophenol	ND	58	200		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4-Dimethylphenol	ND	59	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4,6-Dinitro-2-methylphenol	ND	54	200		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4-Dinitrophenol	ND	37	200		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4-Dinitrotoluene	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Fluoranthene	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Fluorene	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Hexachlorobenzene	ND	62	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Hexachlorobutadiene	ND	64	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Hexachlorocyclopentadiene	ND	39	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Hexachloroethane	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Indeno(1,2,3-cd)pyrene	ND	70	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Isophorone	ND	62	100		µg/L	1	9/20/2018 9:19:11 PM	40294
1-Methylnaphthalene	ND	70	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Methylnaphthalene	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Methylphenol	ND	63	100		µg/L	1	9/20/2018 9:19:11 PM	40294
3+4-Methylphenol	ND	54	100		µg/L	1	9/20/2018 9:19:11 PM	40294
N-Nitrosodi-n-propylamine	ND	61	100		µg/L	1	9/20/2018 9:19:11 PM	40294
N-Nitrosodimethylamine	ND	69	100		µg/L	1	9/20/2018 9:19:11 PM	40294
N-Nitrosodiphenylamine	ND	67	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Naphthalene	ND	50	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Nitroaniline	ND	59	100		µg/L	1	9/20/2018 9:19:11 PM	40294
3-Nitroaniline	ND	68	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Nitroaniline	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Nitrobenzene	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2-Nitrophenol	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
4-Nitrophenol	ND	56	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Pentachlorophenol	ND	53	200		µg/L	1	9/20/2018 9:19:11 PM	40294
Phenanthrene	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Phenol	ND	60	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Pyrene	ND	65	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Pyridine	ND	54	100		µg/L	1	9/20/2018 9:19:11 PM	40294
1,2,4-Trichlorobenzene	ND	64	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4,5-Trichlorophenol	ND	58	100		µg/L	1	9/20/2018 9:19:11 PM	40294
2,4,6-Trichlorophenol	ND	64	100		µg/L	1	9/20/2018 9:19:11 PM	40294
Surr: 2-Fluorophenol	37.5	0	15-74.1		%Rec	1	9/20/2018 9:19:11 PM	40294
Surr: Phenol-d5	37.2	0	15-59.8		%Rec	1	9/20/2018 9:19:11 PM	40294
Surr: 2,4,6-Tribromophenol	55.1	0	22.1-112		%Rec	1	9/20/2018 9:19:11 PM	40294
Surr: Nitrobenzene-d5	62.3	0	33.2-94		%Rec	1	9/20/2018 9:19:11 PM	40294
Surr: 2-Fluorobiphenyl	64.4	0	34-90.9		%Rec	1	9/20/2018 9:19:11 PM	40294
Surr: 4-Terphenyl-d14	105	0	15-149		%Rec	1	9/20/2018 9:19:11 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	30	0.59	2.0	*	mg/L	20	9/10/2018 8:07:17 PM	R54060
Chloride	5800	91	250		mg/L	500	9/25/2018 1:51:13 AM	A54385
Bromide	2.8	0.13	0.50		mg/L	5	9/10/2018 7:54:26 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 7:54:26 PM	R54060
Sulfate	1500	100	250		mg/L	500	9/25/2018 1:51:13 AM	A54385
Nitrate+Nitrite as N	ND	1.1	4.0		mg/L	20	9/26/2018 2:19:42 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/17/2018 3:05:45 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 3:05:45 PM	40361
Chromium	0.0044	0.0018	0.0060	J	mg/L	1	9/19/2018 3:22:44 PM	40361
Copper	0.0045	0.0041	0.0060	J	mg/L	1	9/19/2018 3:22:44 PM	40361
Iron	0.094	0.010	0.020		mg/L	1	9/17/2018 3:05:45 PM	40361
Manganese	0.16	0.0011	0.0020	*	mg/L	1	9/17/2018 3:05:45 PM	40361
Silver	0.0074	0.0012	0.0050		mg/L	1	9/17/2018 3:05:45 PM	40361
Zinc	0.0043	0.0033	0.010	J	mg/L	1	9/17/2018 3:05:45 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.021	0.0021	0.0050	*	mg/L	5	9/18/2018 2:48:39 PM	40361
Lead	ND	0.0011	0.0025		mg/L	5	9/18/2018 2:48:39 PM	40361
Selenium	ND	0.0049	0.0050		mg/L	5	9/18/2018 2:48:39 PM	40361
Uranium	0.0012	0.00034	0.0025	J	mg/L	5	9/19/2018 12:09:10 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000044	0.000038	0.00020	J	mg/L	1	9/28/2018 10:57:56 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/6/2018 3:15:00 PM
Lab ID: 1809409-009E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.16	0.00099	0.0020		mg/L	1	10/2/2018 10:43:49 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:43:49 PM	B54598
Calcium	330	0.78	10		mg/L	10	10/2/2018 10:46:03 PM	B54598
Chromium	0.0028	0.0013	0.0060	J	mg/L	1	10/2/2018 10:43:49 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:43:49 PM	B54598
Iron	0.028	0.016	0.020		mg/L	1	10/2/2018 10:43:49 PM	B54598
Magnesium	160	2.5	10		mg/L	10	10/2/2018 10:46:03 PM	B54598
Manganese	0.15	0.00039	0.0020	*	mg/L	1	10/2/2018 10:43:49 PM	B54598
Potassium	470	1.1	10		mg/L	10	10/2/2018 10:46:03 PM	B54598
Silver	0.0077	0.0018	0.0050		mg/L	1	10/2/2018 10:43:49 PM	B54598
Sodium	3500	8.2	50		mg/L	50	10/3/2018 6:28:40 PM	A54626
Zinc	0.0033	0.0021	0.010	J	mg/L	1	10/2/2018 10:43:49 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.019	0.0021	0.0050	*	mg/L	5	9/25/2018 12:59:01 PM	B54404
Lead	ND	0.00087	0.0025		mg/L	5	9/25/2018 12:59:01 PM	B54404
Selenium	ND	0.0038	0.0050		mg/L	5	9/25/2018 12:59:01 PM	B54404
Uranium	0.0012	0.00048	0.0025	J	mg/L	5	9/25/2018 12:59:01 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000050	0.000038	0.00020	J	mg/L	1	9/28/2018 11:00:09 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Toluene	ND	0.34	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2,4-Trimethylbenzene	ND	0.51	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
2-Methylnaphthalene	ND	0.48	4.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Acetone	2.0	1.6	10	J	µg/L	2	9/14/2018 4:05:06 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
2-Butanone	ND	2.5	10		µg/L	2	9/14/2018 4:05:06 AM	B54139
Carbon disulfide	ND	0.77	10		µg/L	2	9/14/2018 4:05:06 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 4:05:06 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 4:05:06 AM	B54139
Methylene Chloride	0.47	0.41	3.0	J	µg/L	2	9/14/2018 4:05:06 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 4:05:06 AM	B54139
Xylenes, Total	ND	1.3	1.5		µg/L	2	9/14/2018 4:05:06 AM	B54139
Surr: 1,2-Dichloroethane-d4	92.9	0	70-130		%Rec	2	9/14/2018 4:05:06 AM	B54139
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%Rec	2	9/14/2018 4:05:06 AM	B54139
Surr: Dibromofluoromethane	89.9	0	70-130		%Rec	2	9/14/2018 4:05:06 AM	B54139
Surr: Toluene-d8	98.4	0	70-130		%Rec	2	9/14/2018 4:05:06 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Acenaphthylene	ND	62	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Aniline	ND	62	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Anthracene	ND	57	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Azobenzene	ND	67	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benz(a)anthracene	ND	53	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benzo(a)pyrene	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benzo(b)fluoranthene	ND	71	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benzo(g,h,i)perylene	ND	57	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benzo(k)fluoranthene	ND	64	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Benzoic acid	65	63	200	J	µg/L	1	9/20/2018 9:48:52 PM	40294
Benzyl alcohol	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Bis(2-chloroethoxy)methane	ND	61	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Bis(2-chloroethyl)ether	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Bis(2-chloroisopropyl)ether	ND	49	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Bis(2-ethylhexyl)phthalate	ND	81	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Bromophenyl phenyl ether	ND	69	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Butyl benzyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Carbazole	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Chloro-3-methylphenol	ND	56	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Chloroaniline	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Chloronaphthalene	ND	61	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Chlorophenol	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Chlorophenyl phenyl ether	ND	72	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Chrysene	ND	68	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Di-n-butyl phthalate	ND	68	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Di-n-octyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Dibenz(a,h)anthracene	ND	56	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Dibenzofuran	ND	69	100		µg/L	1	9/20/2018 9:48:52 PM	40294
1,2-Dichlorobenzene	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
1,3-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
1,4-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
3,3´-Dichlorobenzidine	ND	68	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Diethyl phthalate	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Dimethyl phthalate	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4-Dichlorophenol	ND	58	200		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4-Dimethylphenol	ND	59	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4,6-Dinitro-2-methylphenol	ND	54	200		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4-Dinitrophenol	ND	37	200		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4-Dinitrotoluene	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Fluoranthene	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Fluorene	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Hexachlorobenzene	ND	62	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Hexachlorobutadiene	ND	64	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Hexachlorocyclopentadiene	ND	39	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Hexachloroethane	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Indeno(1,2,3-cd)pyrene	ND	70	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Isophorone	ND	62	100		µg/L	1	9/20/2018 9:48:52 PM	40294
1-Methylnaphthalene	ND	70	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Methylnaphthalene	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Methylphenol	ND	63	100		µg/L	1	9/20/2018 9:48:52 PM	40294
3+4-Methylphenol	ND	54	100		µg/L	1	9/20/2018 9:48:52 PM	40294
N-Nitrosodi-n-propylamine	ND	61	100		µg/L	1	9/20/2018 9:48:52 PM	40294
N-Nitrosodimethylamine	ND	69	100		µg/L	1	9/20/2018 9:48:52 PM	40294
N-Nitrosodiphenylamine	ND	67	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Naphthalene	ND	50	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Nitroaniline	ND	59	100		µg/L	1	9/20/2018 9:48:52 PM	40294
3-Nitroaniline	ND	68	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Nitroaniline	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Nitrobenzene	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2-Nitrophenol	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
4-Nitrophenol	ND	56	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Pentachlorophenol	ND	53	200		µg/L	1	9/20/2018 9:48:52 PM	40294
Phenanthrene	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Phenol	ND	60	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Pyrene	ND	65	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Pyridine	ND	54	100		µg/L	1	9/20/2018 9:48:52 PM	40294
1,2,4-Trichlorobenzene	ND	64	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4,5-Trichlorophenol	ND	58	100		µg/L	1	9/20/2018 9:48:52 PM	40294
2,4,6-Trichlorophenol	ND	64	100		µg/L	1	9/20/2018 9:48:52 PM	40294
Surr: 2-Fluorophenol	45.2	0	15-74.1		%Rec	1	9/20/2018 9:48:52 PM	40294
Surr: Phenol-d5	41.5	0	15-59.8		%Rec	1	9/20/2018 9:48:52 PM	40294
Surr: 2,4,6-Tribromophenol	56.6	0	22.1-112		%Rec	1	9/20/2018 9:48:52 PM	40294
Surr: Nitrobenzene-d5	68.7	0	33.2-94		%Rec	1	9/20/2018 9:48:52 PM	40294
Surr: 2-Fluorobiphenyl	68.1	0	34-90.9		%Rec	1	9/20/2018 9:48:52 PM	40294
Surr: 4-Terphenyl-d14	77.6	0	15-149		%Rec	1	9/20/2018 9:48:52 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	33	0.59	2.0	*	mg/L	20	9/10/2018 8:33:01 PM	R54060
Chloride	6300	180	500		mg/L	1E+	9/25/2018 2:04:05 AM	A54385
Bromide	3.3	0.13	0.50		mg/L	5	9/10/2018 8:20:09 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 8:20:09 PM	R54060
Sulfate	1600	210	500		mg/L	1E+	9/25/2018 2:04:05 AM	A54385
Nitrate+Nitrite as N	ND	2.7	10		mg/L	50	9/26/2018 2:32:05 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/17/2018 3:10:07 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 3:10:07 PM	40361
Chromium	0.0037	0.0018	0.0060	J	mg/L	1	9/19/2018 3:24:58 PM	40361
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:24:58 PM	40361
Iron	0.081	0.010	0.020		mg/L	1	9/17/2018 3:10:07 PM	40361
Manganese	0.15	0.0011	0.0020	*	mg/L	1	9/17/2018 3:10:07 PM	40361
Silver	0.0087	0.0012	0.0050		mg/L	1	9/17/2018 3:10:07 PM	40361
Zinc	ND	0.0033	0.010		mg/L	1	9/17/2018 3:10:07 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.023	0.0021	0.0050	*	mg/L	5	9/18/2018 2:50:56 PM	40361
Lead	ND	0.0011	0.0025		mg/L	5	9/18/2018 2:50:56 PM	40361
Selenium	ND	0.0049	0.0050		mg/L	5	9/18/2018 2:50:56 PM	40361
Uranium	0.0012	0.00034	0.0025	J	mg/L	5	9/19/2018 12:11:27 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000078	0.000038	0.00020	J	mg/L	1	9/28/2018 11:02:23 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:05:00 AM
Lab ID: 1809409-010E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	10/2/2018 10:54:47 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 10:54:47 PM	B54598
Calcium	350	0.78	10		mg/L	10	10/2/2018 10:57:02 PM	B54598
Chromium	0.0042	0.0013	0.0060	J	mg/L	1	10/2/2018 10:54:47 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 10:54:47 PM	B54598
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 10:54:47 PM	B54598
Magnesium	180	2.5	10		mg/L	10	10/2/2018 10:57:02 PM	B54598
Manganese	0.13	0.00039	0.0020	*	mg/L	1	10/2/2018 10:54:47 PM	B54598
Potassium	490	1.1	10		mg/L	10	10/3/2018 6:30:52 PM	A54626
Silver	0.0076	0.0018	0.0050		mg/L	1	10/2/2018 10:54:47 PM	B54598
Sodium	3800	16	100		mg/L	100	10/3/2018 6:39:35 PM	A54626
Zinc	0.0036	0.0021	0.010	J	mg/L	1	10/2/2018 10:54:47 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.022	0.0021	0.0050	*	mg/L	5	9/21/2018 3:37:51 PM	C54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:37:51 PM	C54342
Selenium	ND	0.0038	0.0050		mg/L	5	9/21/2018 3:37:51 PM	C54342
Uranium	0.0012	0.00048	0.0025	J	mg/L	5	9/21/2018 3:37:51 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000061	0.000038	0.00020	J	mg/L	1	9/28/2018 11:04:38 AM	40617

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2,4-Trimethylbenzene	0.47	0.25	1.0	J	µg/L	1	9/14/2018 4:34:23 AM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Acetone	27	0.79	10		µg/L	1	9/14/2018 4:34:23 AM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
2-Butanone	1.7	1.3	10	J	µg/L	1	9/14/2018 4:34:23 AM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/14/2018 4:34:23 AM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Chloromethane	2.1	0.29	3.0	J	µg/L	1	9/14/2018 4:34:23 AM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/14/2018 4:34:23 AM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
4-Methyl-2-pentanone	0.58	0.45	10	J	µg/L	1	9/14/2018 4:34:23 AM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/14/2018 4:34:23 AM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/14/2018 4:34:23 AM	B54139
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	9/14/2018 4:34:23 AM	B54139
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	9/14/2018 4:34:23 AM	B54139
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/14/2018 4:34:23 AM	B54139
Surr: Toluene-d8	98.9	0	70-130		%Rec	1	9/14/2018 4:34:23 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Aniline	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Anthracene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Azobenzene	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzoic acid	ND	32	100		µg/L	1	9/20/2018 10:18:34 PM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Carbazole	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Chrysene	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Fluoranthene	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Fluorene	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Isophorone	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
3+4-Methylphenol	ND	27	50		µg/L	1	9/20/2018 10:18:34 PM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/20/2018 10:18:34 PM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Naphthalene	ND	25	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
3-Nitroaniline	ND	34	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/20/2018 10:18:34 PM	40294
Phenanthrene	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Phenol	ND	30	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Pyrene	ND	33	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Pyridine	ND	27	50		µg/L	1	9/20/2018 10:18:34 PM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/20/2018 10:18:34 PM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/20/2018 10:18:34 PM	40294
Surr: 2-Fluorophenol	4.84	0	15-74.1	S	%Rec	1	9/20/2018 10:18:34 PM	40294
Surr: Phenol-d5	5.42	0	15-59.8	S	%Rec	1	9/20/2018 10:18:34 PM	40294
Surr: 2,4,6-Tribromophenol	8.71	0	22.1-112	S	%Rec	1	9/20/2018 10:18:34 PM	40294
Surr: Nitrobenzene-d5	42.4	0	33.2-94		%Rec	1	9/20/2018 10:18:34 PM	40294
Surr: 2-Fluorobiphenyl	49.0	0	34-90.9		%Rec	1	9/20/2018 10:18:34 PM	40294
Surr: 4-Terphenyl-d14	69.0	0	15-149		%Rec	1	9/20/2018 10:18:34 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	45	1.6	5.0	*	mg/L	50	10/1/2018 3:03:50 PM	R54566
Chloride	70000	1800	5000		mg/L	1E+	9/25/2018 2:16:57 AM	A54385
Bromide	43	0.54	2.0		mg/L	20	9/10/2018 8:58:44 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	1.9	10	H	mg/L	20	9/10/2018 8:58:44 PM	R54060
Sulfate	12000	2100	5000		mg/L	1E+	9/25/2018 2:16:57 AM	A54385
Nitrate+Nitrite as N	ND	27	100		mg/L	500	9/26/2018 2:44:30 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.19	0.0010	0.0020		mg/L	1	9/17/2018 3:14:28 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 3:14:28 PM	40361
Chromium	0.017	0.0088	0.030	J	mg/L	5	9/25/2018 7:00:05 PM	40361
Copper	ND	0.020	0.030		mg/L	5	10/2/2018 8:17:33 PM	40361
Iron	0.16	0.010	0.020		mg/L	1	9/17/2018 3:14:28 PM	40361
Manganese	0.80	0.0011	0.0020	*	mg/L	1	9/17/2018 3:14:28 PM	40361
Silver	0.016	0.0012	0.0050		mg/L	1	9/17/2018 3:14:28 PM	40361
Zinc	0.0048	0.0033	0.010	J	mg/L	1	9/17/2018 3:14:28 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.16	0.021	0.050	*	mg/L	50	9/19/2018 12:16:03 PM	40361
Lead	ND	0.011	0.025		mg/L	50	9/19/2018 12:16:03 PM	40361
Selenium	ND	0.049	0.050		mg/L	50	9/19/2018 12:16:03 PM	40361
Uranium	0.0051	0.0034	0.025	J	mg/L	50	9/19/2018 12:16:03 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000041	0.000038	0.00020	J	mg/L	1	10/2/2018 4:37:17 PM	40731

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 8:40:00 AM
Lab ID: 1809409-011E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.24	0.0049	0.010		mg/L	5	10/8/2018 3:29:10 PM	A54723
Cadmium	ND	0.0050	0.010		mg/L	5	10/8/2018 3:29:10 PM	A54723
Calcium	690	0.78	10		mg/L	10	10/2/2018 11:01:39 PM	B54598
Chromium	0.020	0.0064	0.030	J	mg/L	5	10/8/2018 3:29:10 PM	A54723
Copper	ND	0.016	0.030		mg/L	5	10/8/2018 3:29:10 PM	A54723
Iron	ND	0.082	0.10		mg/L	5	10/8/2018 3:29:10 PM	A54723
Magnesium	1700	5.0	20		mg/L	20	10/3/2018 6:41:47 PM	A54626
Manganese	0.46	0.0020	0.010	*	mg/L	5	10/8/2018 3:29:10 PM	A54723
Potassium	2300	5.6	50		mg/L	50	10/3/2018 6:43:53 PM	A54626
Silver	0.027	0.0092	0.025		mg/L	5	10/8/2018 3:29:10 PM	A54723
Sodium	38000	160	1000		mg/L	1E+	10/11/2018 9:08:54 PM	A54839
Zinc	ND	0.011	0.050		mg/L	5	10/8/2018 3:29:10 PM	A54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.17	0.021	0.050	*	mg/L	50	9/21/2018 3:40:13 PM	C54342
Lead	ND	0.0087	0.025		mg/L	50	9/21/2018 3:40:13 PM	C54342
Selenium	ND	0.038	0.050		mg/L	50	9/21/2018 3:40:13 PM	C54342
Uranium	0.0051	0.0048	0.025	J	mg/L	50	9/21/2018 3:40:13 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:18:17 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Acetone	8.3	0.79	10	J	µg/L	1	9/14/2018 5:03:15 AM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/14/2018 5:03:15 AM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/14/2018 5:03:15 AM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Chloromethane	1.2	0.29	3.0	J	µg/L	1	9/14/2018 5:03:15 AM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/14/2018 5:03:15 AM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/14/2018 5:03:15 AM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/14/2018 5:03:15 AM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/14/2018 5:03:15 AM	B54139
Surr: 1,2-Dichloroethane-d4	98.7	0	70-130		%Rec	1	9/14/2018 5:03:15 AM	B54139
Surr: 4-Bromofluorobenzene	97.2	0	70-130		%Rec	1	9/14/2018 5:03:15 AM	B54139
Surr: Dibromofluoromethane	95.5	0	70-130		%Rec	1	9/14/2018 5:03:15 AM	B54139
Surr: Toluene-d8	97.2	0	70-130		%Rec	1	9/14/2018 5:03:15 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Aniline	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Anthracene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Azobenzene	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzoic acid	ND	32	100		µg/L	1	9/20/2018 10:48:10 PM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Carbazole	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Chrysene	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Fluoranthene	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Fluorene	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Isophorone	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
3+4-Methylphenol	ND	27	50		µg/L	1	9/20/2018 10:48:10 PM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/20/2018 10:48:10 PM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Naphthalene	ND	25	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
3-Nitroaniline	ND	34	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/20/2018 10:48:10 PM	40294
Phenanthrene	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Phenol	ND	30	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Pyrene	ND	33	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Pyridine	ND	27	50		µg/L	1	9/20/2018 10:48:10 PM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/20/2018 10:48:10 PM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/20/2018 10:48:10 PM	40294
Surr: 2-Fluorophenol	10.7	0	15-74.1	S	%Rec	1	9/20/2018 10:48:10 PM	40294
Surr: Phenol-d5	10.5	0	15-59.8	S	%Rec	1	9/20/2018 10:48:10 PM	40294
Surr: 2,4,6-Tribromophenol	11.0	0	22.1-112	S	%Rec	1	9/20/2018 10:48:10 PM	40294
Surr: Nitrobenzene-d5	51.7	0	33.2-94		%Rec	1	9/20/2018 10:48:10 PM	40294
Surr: 2-Fluorobiphenyl	55.2	0	34-90.9		%Rec	1	9/20/2018 10:48:10 PM	40294
Surr: 4-Terphenyl-d14	71.5	0	15-149		%Rec	1	9/20/2018 10:48:10 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	36	0.59	2.0	*	mg/L	20	9/10/2018 9:24:27 PM	R54060
Chloride	37000	910	2500		mg/L	5E+	9/25/2018 2:29:48 AM	A54385
Bromide	23	0.54	2.0		mg/L	20	9/10/2018 9:24:27 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	1.9	10	H	mg/L	20	9/10/2018 9:24:27 PM	R54060
Sulfate	6600	1000	2500		mg/L	5E+	9/25/2018 2:29:48 AM	A54385
Nitrate+Nitrite as N	ND	11	40		mg/L	200	9/26/2018 2:56:54 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.20	0.0010	0.0020		mg/L	1	9/17/2018 3:19:09 PM	40361
Cadmium	ND	0.00058	0.0020		mg/L	1	9/17/2018 3:19:09 PM	40361
Chromium	0.0090	0.0018	0.0060		mg/L	1	9/19/2018 3:29:35 PM	40361
Copper	0.029	0.0041	0.0060		mg/L	1	9/20/2018 7:14:53 PM	40361
Iron	0.062	0.010	0.020		mg/L	1	9/17/2018 3:19:09 PM	40361
Manganese	1.0	0.0055	0.010	*	mg/L	5	9/17/2018 3:21:26 PM	40361
Silver	0.015	0.0012	0.0050		mg/L	1	9/17/2018 3:19:09 PM	40361
Zinc	ND	0.0033	0.010		mg/L	1	9/17/2018 3:19:09 PM	40361
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.096	0.0083	0.020	*	mg/L	20	9/19/2018 12:18:20 PM	40361
Lead	ND	0.0046	0.010		mg/L	20	9/19/2018 12:18:20 PM	40361
Selenium	ND	0.020	0.020		mg/L	20	9/19/2018 12:18:20 PM	40361
Uranium	0.0031	0.0014	0.010	J	mg/L	20	9/19/2018 12:18:20 PM	40361
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	9/28/2018 11:25:13 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:00:00 AM
Lab ID: 1809409-012E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.24	0.0049	0.010		mg/L	5	10/8/2018 3:38:06 PM	A54723
Cadmium	ND	0.0050	0.010		mg/L	5	10/8/2018 3:38:06 PM	A54723
Calcium	620	0.78	10		mg/L	10	10/2/2018 11:06:18 PM	B54598
Chromium	0.011	0.0064	0.030	J	mg/L	5	10/8/2018 3:38:06 PM	A54723
Copper	ND	0.016	0.030		mg/L	5	10/8/2018 3:38:06 PM	A54723
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 11:03:54 PM	B54598
Magnesium	970	2.5	10		mg/L	10	10/2/2018 11:06:18 PM	B54598
Manganese	0.94	0.0020	0.010	*	mg/L	5	10/8/2018 3:38:06 PM	A54723
Potassium	1300	2.3	20		mg/L	20	10/3/2018 6:48:12 PM	A54626
Silver	0.022	0.0092	0.025	J	mg/L	5	10/8/2018 3:38:06 PM	A54723
Sodium	23000	82	500		mg/L	500	10/3/2018 6:50:18 PM	A54626
Zinc	ND	0.011	0.050		mg/L	5	10/8/2018 3:38:06 PM	A54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.093	0.021	0.050	*	mg/L	50	9/25/2018 1:03:39 PM	B54404
Lead	ND	0.0035	0.010		mg/L	20	9/21/2018 3:42:35 PM	C54342
Selenium	ND	0.038	0.050		mg/L	50	9/25/2018 1:03:39 PM	B54404
Uranium	0.0030	0.0019	0.010	J	mg/L	20	9/21/2018 3:42:35 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:27:31 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Acetone	16	0.79	10		µg/L	1	9/14/2018 5:32:46 AM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
2-Butanone	1.5	1.3	10	J	µg/L	1	9/14/2018 5:32:46 AM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/14/2018 5:32:46 AM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Chloromethane	2.5	0.29	3.0	J	µg/L	1	9/14/2018 5:32:46 AM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/14/2018 5:32:46 AM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
4-Methyl-2-pentanone	0.47	0.45	10	J	µg/L	1	9/14/2018 5:32:46 AM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/14/2018 5:32:46 AM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/14/2018 5:32:46 AM	B54139
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	9/14/2018 5:32:46 AM	B54139
Surr: 4-Bromofluorobenzene	99.1	0	70-130		%Rec	1	9/14/2018 5:32:46 AM	B54139
Surr: Dibromofluoromethane	96.2	0	70-130		%Rec	1	9/14/2018 5:32:46 AM	B54139
Surr: Toluene-d8	97.0	0	70-130		%Rec	1	9/14/2018 5:32:46 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Acenaphthylene	ND	6.2	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Aniline	ND	6.2	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Anthracene	ND	5.7	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Azobenzene	ND	6.7	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Benzoic acid	6.3	6.3	20	J	µg/L	1	9/20/2018 11:17:54 PM	40294
Benzyl alcohol	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Carbazole	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Chloroaniline	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Chlorophenol	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Chrysene	ND	6.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Dibenzofuran	ND	6.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Diethyl phthalate	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Fluoranthene	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Fluorene	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Hexachloroethane	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Isophorone	ND	6.2	10		µg/L	1	9/20/2018 11:17:54 PM	40294
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Methylphenol	ND	6.3	10		µg/L	1	9/20/2018 11:17:54 PM	40294
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/20/2018 11:17:54 PM	40294
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Naphthalene	ND	5.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Nitroaniline	ND	5.9	10		µg/L	1	9/20/2018 11:17:54 PM	40294
3-Nitroaniline	ND	6.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Nitroaniline	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Nitrobenzene	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2-Nitrophenol	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
4-Nitrophenol	ND	5.6	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Pentachlorophenol	ND	5.3	20		µg/L	1	9/20/2018 11:17:54 PM	40294
Phenanthrene	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Phenol	ND	6.0	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Pyrene	ND	6.5	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Pyridine	ND	5.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/20/2018 11:17:54 PM	40294
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/20/2018 11:17:54 PM	40294
Surr: 2-Fluorophenol	20.1	0	15-74.1		%Rec	1	9/20/2018 11:17:54 PM	40294
Surr: Phenol-d5	34.0	0	15-59.8		%Rec	1	9/20/2018 11:17:54 PM	40294
Surr: 2,4,6-Tribromophenol	26.2	0	22.1-112		%Rec	1	9/20/2018 11:17:54 PM	40294
Surr: Nitrobenzene-d5	38.3	0	33.2-94		%Rec	1	9/20/2018 11:17:54 PM	40294
Surr: 2-Fluorobiphenyl	46.5	0	34-90.9		%Rec	1	9/20/2018 11:17:54 PM	40294
Surr: 4-Terphenyl-d14	47.0	0	15-149		%Rec	1	9/20/2018 11:17:54 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	42	0.59	2.0	*	mg/L	20	9/10/2018 9:50:09 PM	R54060
Chloride	42000	910	2500		mg/L	5E+	9/25/2018 2:42:41 AM	A54385
Bromide	20	0.54	2.0		mg/L	20	9/10/2018 9:50:09 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	1.9	10	H	mg/L	20	9/10/2018 9:50:09 PM	R54060
Sulfate	4600	1000	2500		mg/L	5E+	9/25/2018 2:42:41 AM	A54385
Nitrate+Nitrite as N	ND	11	40		mg/L	200	9/26/2018 3:46:33 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.18	0.0010	0.0020		mg/L	1	9/17/2018 3:33:40 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 2:45:59 PM	40362
Chromium	0.0069	0.0018	0.0060		mg/L	1	9/19/2018 2:45:59 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 2:45:59 PM	40362
Iron	0.070	0.010	0.020		mg/L	1	9/17/2018 3:33:40 PM	40362
Manganese	1.3	0.0055	0.010	*	mg/L	5	9/17/2018 3:40:45 PM	40362
Silver	0.014	0.0012	0.0050		mg/L	1	9/17/2018 3:33:40 PM	40362
Zinc	0.0055	0.0033	0.010	J	mg/L	1	9/19/2018 2:45:59 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.082	0.021	0.050	*	mg/L	50	9/19/2018 12:27:33 PM	40362
Lead	ND	0.011	0.025		mg/L	50	9/19/2018 12:27:33 PM	40362
Selenium	ND	0.049	0.050		mg/L	50	9/19/2018 12:27:33 PM	40362
Uranium	ND	0.0034	0.025		mg/L	50	9/19/2018 12:27:33 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:29:42 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 9:30:00 AM
Lab ID: 1809409-013E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.17	0.0049	0.010		mg/L	5	10/18/2018 6:21:25 PM	A55001
Cadmium	ND	0.0050	0.010		mg/L	5	10/18/2018 6:21:25 PM	A55001
Calcium	560	0.78	10		mg/L	10	10/18/2018 6:23:40 PM	A55001
Chromium	ND	0.0064	0.030		mg/L	5	10/18/2018 6:21:25 PM	A55001
Copper	ND	0.016	0.030		mg/L	5	10/18/2018 6:21:25 PM	A55001
Iron	ND	0.082	0.10		mg/L	5	10/18/2018 6:21:25 PM	A55001
Magnesium	900	2.5	10		mg/L	10	10/18/2018 6:23:40 PM	A55001
Manganese	0.72	0.0020	0.010	*	mg/L	5	10/18/2018 6:21:25 PM	A55001
Potassium	1300	5.6	50		mg/L	50	10/18/2018 6:25:48 PM	A55001
Silver	0.021	0.0092	0.025	J	mg/L	5	10/18/2018 6:21:25 PM	A55001
Sodium	28000	82	500		mg/L	500	10/18/2018 6:27:47 PM	A55001
Zinc	ND	0.011	0.050		mg/L	5	10/18/2018 6:21:25 PM	A55001
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.086	0.021	0.050	*	mg/L	50	9/21/2018 3:44:59 PM	C54342
Lead	ND	0.0087	0.025		mg/L	50	9/21/2018 3:44:59 PM	C54342
Selenium	ND	0.038	0.050		mg/L	50	9/21/2018 3:44:59 PM	C54342
Uranium	ND	0.0048	0.025		mg/L	50	9/21/2018 3:44:59 PM	C54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:31:54 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2,4-Trimethylbenzene	1.2	0.25	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1-Methylnaphthalene	0.42	0.34	4.0	J	µg/L	1	9/14/2018 6:01:49 AM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Acetone	66	3.9	50		µg/L	5	9/14/2018 8:28:04 AM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
2-Butanone	48	1.3	10		µg/L	1	9/14/2018 6:01:49 AM	B54139
Carbon disulfide	0.60	0.39	10	J	µg/L	1	9/14/2018 6:01:49 AM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Chloromethane	31	0.29	3.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/14/2018 6:01:49 AM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
4-Methyl-2-pentanone	2.8	0.45	10	J	µg/L	1	9/14/2018 6:01:49 AM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/14/2018 6:01:49 AM	B54139
Xylenes, Total	1.0	0.64	1.5	J	µg/L	1	9/14/2018 6:01:49 AM	B54139
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	9/14/2018 6:01:49 AM	B54139
Surr: 4-Bromofluorobenzene	92.7	0	70-130		%Rec	1	9/14/2018 6:01:49 AM	B54139
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/14/2018 6:01:49 AM	B54139
Surr: Toluene-d8	93.3	0	70-130		%Rec	1	9/14/2018 6:01:49 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Acenaphthylene	ND	62	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Aniline	ND	62	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Anthracene	ND	57	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Azobenzene	ND	67	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benz(a)anthracene	ND	53	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benzo(a)pyrene	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benzo(b)fluoranthene	ND	71	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benzo(g,h,i)perylene	ND	57	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benzo(k)fluoranthene	ND	64	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Benzoic acid	72	63	200	J	µg/L	1	9/20/2018 11:47:31 PM	40294
Benzyl alcohol	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Bis(2-chloroethoxy)methane	ND	61	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Bis(2-chloroethyl)ether	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Bis(2-chloroisopropyl)ether	ND	49	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Bis(2-ethylhexyl)phthalate	ND	81	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Bromophenyl phenyl ether	ND	69	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Butyl benzyl phthalate	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Carbazole	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Chloro-3-methylphenol	ND	56	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Chloroaniline	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Chloronaphthalene	ND	61	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Chlorophenol	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Chlorophenyl phenyl ether	ND	72	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Chrysene	ND	68	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Di-n-butyl phthalate	ND	68	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Di-n-octyl phthalate	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Dibenz(a,h)anthracene	ND	56	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Dibenzofuran	ND	69	100		µg/L	1	9/20/2018 11:47:31 PM	40294
1,2-Dichlorobenzene	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
1,3-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
1,4-Dichlorobenzene	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
3,3´-Dichlorobenzidine	ND	68	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Diethyl phthalate	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Dimethyl phthalate	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4-Dichlorophenol	ND	58	200		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4-Dimethylphenol	ND	59	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4,6-Dinitro-2-methylphenol	ND	54	200		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4-Dinitrophenol	ND	37	200		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4-Dinitrotoluene	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Fluoranthene	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Fluorene	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Hexachlorobenzene	ND	62	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Hexachlorobutadiene	ND	64	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Hexachlorocyclopentadiene	ND	39	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Hexachloroethane	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Indeno(1,2,3-cd)pyrene	ND	70	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Isophorone	ND	62	100		µg/L	1	9/20/2018 11:47:31 PM	40294
1-Methylnaphthalene	ND	70	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Methylnaphthalene	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Methylphenol	ND	63	100		µg/L	1	9/20/2018 11:47:31 PM	40294
3+4-Methylphenol	ND	54	100		µg/L	1	9/20/2018 11:47:31 PM	40294
N-Nitrosodi-n-propylamine	ND	61	100		µg/L	1	9/20/2018 11:47:31 PM	40294
N-Nitrosodimethylamine	ND	69	100		µg/L	1	9/20/2018 11:47:31 PM	40294
N-Nitrosodiphenylamine	ND	67	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Naphthalene	ND	50	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Nitroaniline	ND	59	100		µg/L	1	9/20/2018 11:47:31 PM	40294
3-Nitroaniline	ND	68	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Nitroaniline	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Nitrobenzene	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2-Nitrophenol	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
4-Nitrophenol	ND	56	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Pentachlorophenol	ND	53	200		µg/L	1	9/20/2018 11:47:31 PM	40294
Phenanthrene	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Phenol	ND	60	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Pyrene	ND	65	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Pyridine	ND	54	100		µg/L	1	9/20/2018 11:47:31 PM	40294
1,2,4-Trichlorobenzene	ND	64	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4,5-Trichlorophenol	ND	58	100		µg/L	1	9/20/2018 11:47:31 PM	40294
2,4,6-Trichlorophenol	ND	64	100		µg/L	1	9/20/2018 11:47:31 PM	40294
Surr: 2-Fluorophenol	9.09	0	15-74.1	S	%Rec	1	9/20/2018 11:47:31 PM	40294
Surr: Phenol-d5	17.7	0	15-59.8		%Rec	1	9/20/2018 11:47:31 PM	40294
Surr: 2,4,6-Tribromophenol	12.4	0	22.1-112	S	%Rec	1	9/20/2018 11:47:31 PM	40294
Surr: Nitrobenzene-d5	29.8	0	33.2-94	S	%Rec	1	9/20/2018 11:47:31 PM	40294
Surr: 2-Fluorobiphenyl	33.7	0	34-90.9	S	%Rec	1	9/20/2018 11:47:31 PM	40294
Surr: 4-Terphenyl-d14	56.7	0	15-149		%Rec	1	9/20/2018 11:47:31 PM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	41	3.1	10	*	mg/L	100	10/1/2018 3:16:42 PM	R54566
Chloride	170000	3600	10000		mg/L	2E+	9/25/2018 2:55:34 AM	A54385
Bromide	280	2.7	10		mg/L	100	10/1/2018 3:16:42 PM	R54566
Phosphorus, Orthophosphate (As P)	8.6	3.0	50	JH	mg/L	100	10/1/2018 3:16:42 PM	R54566
Sulfate	57000	4100	10000		mg/L	2E+	9/25/2018 2:55:34 AM	A54385
Nitrate+Nitrite as N	ND	55	200		mg/L	1E+	9/26/2018 3:58:58 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.027	0.0050	0.010		mg/L	5	9/17/2018 3:47:22 PM	40362
Cadmium	ND	0.0029	0.010		mg/L	5	9/19/2018 2:52:36 PM	40362
Chromium	0.064	0.0088	0.030		mg/L	5	9/19/2018 2:52:36 PM	40362
Copper	ND	0.020	0.030		mg/L	5	9/19/2018 2:52:36 PM	40362
Iron	0.26	0.051	0.10		mg/L	5	9/17/2018 3:47:22 PM	40362
Manganese	9.0	0.011	0.020	*	mg/L	10	9/17/2018 4:58:31 PM	40362
Silver	0.010	0.0061	0.025	J	mg/L	5	9/17/2018 3:47:22 PM	40362
Zinc	ND	0.016	0.050		mg/L	5	9/19/2018 2:52:36 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.96	0.041	0.10	*	mg/L	100	9/19/2018 12:34:27 PM	40362
Lead	ND	0.023	0.050		mg/L	100	9/19/2018 12:34:27 PM	40362
Selenium	ND	0.098	0.10		mg/L	100	9/19/2018 12:34:27 PM	40362
Uranium	0.013	0.0068	0.050	J	mg/L	100	9/19/2018 12:34:27 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:34:06 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 10:25:00 AM
Lab ID: 1809409-014E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.027	0.0049	0.010		mg/L	5	10/18/2018 6:30:01 PM	A55001
Cadmium	ND	0.0050	0.010		mg/L	5	10/18/2018 6:30:01 PM	A55001
Calcium	200	0.39	5.0		mg/L	5	10/18/2018 6:30:01 PM	A55001
Chromium	0.047	0.0064	0.030		mg/L	5	10/18/2018 6:30:01 PM	A55001
Copper	ND	0.016	0.030		mg/L	5	10/18/2018 6:30:01 PM	A55001
Iron	0.090	0.082	0.10	J	mg/L	5	10/18/2018 6:30:01 PM	A55001
Magnesium	9200	25	100		mg/L	100	10/18/2018 6:36:51 PM	A55001
Manganese	12	0.020	0.10	*	mg/L	50	10/18/2018 6:34:42 PM	A55001
Potassium	7800	56	500		mg/L	500	10/18/2018 6:38:53 PM	A55001
Silver	0.014	0.0092	0.025	J	mg/L	5	10/18/2018 6:30:01 PM	A55001
Sodium	91000	160	1000		mg/L	1E+	10/3/2018 7:07:36 PM	A54626
Zinc	0.021	0.011	0.050	J	mg/L	5	10/18/2018 6:30:01 PM	A55001
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.86	0.042	0.10	*	mg/L	100	9/21/2018 3:47:22 PM	A54342
Lead	ND	0.035	0.10		mg/L	200	9/25/2018 1:05:58 PM	B54404
Selenium	ND	0.076	0.10		mg/L	100	9/21/2018 3:47:22 PM	A54342
Uranium	ND	0.019	0.10		mg/L	200	9/25/2018 1:05:58 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:36:18 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Acetone	98	0.79	10		µg/L	1	9/14/2018 6:30:52 AM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
2-Butanone	8.3	1.3	10	J	µg/L	1	9/14/2018 6:30:52 AM	B54139
Carbon disulfide	0.77	0.39	10	J	µg/L	1	9/14/2018 6:30:52 AM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Chloromethane	1.4	0.29	3.0	J	µg/L	1	9/14/2018 6:30:52 AM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/14/2018 6:30:52 AM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
4-Methyl-2-pentanone	1.6	0.45	10	J	µg/L	1	9/14/2018 6:30:52 AM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/14/2018 6:30:52 AM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/14/2018 6:30:52 AM	B54139
Surr: 1,2-Dichloroethane-d4	92.4	0	70-130		%Rec	1	9/14/2018 6:30:52 AM	B54139
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/14/2018 6:30:52 AM	B54139
Surr: Dibromofluoromethane	91.6	0	70-130		%Rec	1	9/14/2018 6:30:52 AM	B54139
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	9/14/2018 6:30:52 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	0.45	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
4,4´-DDE	ND	0.45	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
4,4´-DDT	ND	0.45	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Aldrin	ND	0.57	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
alpha-BHC	ND	0.52	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
beta-BHC	ND	0.49	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Chlordane	ND	9.5	10		µg/L	1	9/21/2018 1:24:38 PM	40330
delta-BHC	ND	0.51	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
Dieldrin	ND	0.48	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Endosulfan I	ND	0.38	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Endosulfan II	ND	0.40	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Endosulfan sulfate	ND	0.59	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
Endrin	ND	0.47	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Endrin aldehyde	ND	0.66	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
gamma-BHC	ND	0.50	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
Heptachlor	ND	0.55	0.75		µg/L	1	9/21/2018 1:24:38 PM	40330
Heptachlor epoxide	ND	0.48	0.50		µg/L	1	9/21/2018 1:24:38 PM	40330
Methoxychlor	ND	0.79	0.80		µg/L	1	9/21/2018 1:24:38 PM	40330
Toxaphene	ND	8.9	10		µg/L	1	9/21/2018 1:24:38 PM	40330
Surr: Decachlorobiphenyl	48.6	0	47.2-117		%Rec	1	9/21/2018 1:24:38 PM	40330
Surr: Tetrachloro-m-xylene	84.1	0	26.4-126		%Rec	1	9/21/2018 1:24:38 PM	40330
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Aniline	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Anthracene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Azobenzene	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzoic acid	ND	32	100		µg/L	1	9/21/2018 12:17:07 AM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Chrysene	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Fluoranthene	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Fluorene	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Isophorone	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
3+4-Methylphenol	ND	27	50		µg/L	1	9/21/2018 12:17:07 AM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/21/2018 12:17:07 AM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Naphthalene	ND	25	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	34	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/21/2018 12:17:07 AM	40294
Phenanthrene	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Phenol	ND	30	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Pyrene	ND	33	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Pyridine	ND	27	50		µg/L	1	9/21/2018 12:17:07 AM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/21/2018 12:17:07 AM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/21/2018 12:17:07 AM	40294
Surr: 2-Fluorophenol	18.5	0	15-74.1		%Rec	1	9/21/2018 12:17:07 AM	40294
Surr: Phenol-d5	22.3	0	15-59.8		%Rec	1	9/21/2018 12:17:07 AM	40294
Surr: 2,4,6-Tribromophenol	27.9	0	22.1-112		%Rec	1	9/21/2018 12:17:07 AM	40294
Surr: Nitrobenzene-d5	30.9	0	33.2-94	S	%Rec	1	9/21/2018 12:17:07 AM	40294
Surr: 2-Fluorobiphenyl	24.1	0	34-90.9	S	%Rec	1	9/21/2018 12:17:07 AM	40294
Surr: 4-Terphenyl-d14	44.7	0	15-149		%Rec	1	9/21/2018 12:17:07 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	27	0.59	2.0	*	mg/L	20	9/10/2018 11:07:18 PM	R54060
Chloride	30000	360	1000		mg/L	2E+	9/26/2018 4:48:36 AM	A54419
Bromide	14	0.54	2.0		mg/L	20	9/10/2018 11:07:18 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	1.9	10	H	mg/L	20	9/10/2018 11:07:18 PM	R54060
Sulfate	7600	410	1000		mg/L	2E+	9/26/2018 4:48:36 AM	A54419
Nitrate+Nitrite as N	ND	5.5	20		mg/L	100	9/26/2018 4:11:22 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.19	0.0010	0.0020		mg/L	1	9/17/2018 3:51:58 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 2:54:58 PM	40362
Chromium	0.018	0.0018	0.0060		mg/L	1	9/19/2018 2:54:58 PM	40362
Copper	0.012	0.0041	0.0060		mg/L	1	10/1/2018 10:21:23 AM	40565
Iron	12	0.20	0.40	*	mg/L	20	9/17/2018 4:56:31 PM	40362
Manganese	3.1	0.0055	0.010	*	mg/L	5	9/17/2018 3:54:06 PM	40362
Silver	0.016	0.0012	0.0050		mg/L	1	9/17/2018 3:51:58 PM	40362
Zinc	0.021	0.0033	0.010		mg/L	1	9/19/2018 2:54:58 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.052	0.0083	0.020	*	mg/L	20	9/19/2018 1:36:32 PM	40362
Lead	0.0054	0.0046	0.010	J	mg/L	20	9/19/2018 1:36:32 PM	40362
Selenium	0.022	0.020	0.020		mg/L	20	9/19/2018 1:36:32 PM	40362
Uranium	0.017	0.0014	0.010		mg/L	20	9/19/2018 1:36:32 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:38:32 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12A
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:00:00 AM
Lab ID: 1809409-015E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.084	0.00099	0.0020		mg/L	1	10/2/2018 11:29:26 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 11:29:26 PM	B54598
Calcium	740	0.78	10		mg/L	10	10/2/2018 11:31:35 PM	B54598
Chromium	0.0087	0.0013	0.0060		mg/L	1	10/2/2018 11:29:26 PM	B54598
Copper	0.0062	0.0032	0.0060		mg/L	1	10/2/2018 11:29:26 PM	B54598
Iron	0.75	0.016	0.020	*	mg/L	1	10/2/2018 11:29:26 PM	B54598
Magnesium	820	2.5	10		mg/L	10	10/2/2018 11:31:35 PM	B54598
Manganese	1.6	0.0039	0.020	*	mg/L	10	10/2/2018 11:31:35 PM	B54598
Potassium	1700	5.6	50		mg/L	50	10/3/2018 7:09:50 PM	A54626
Silver	0.017	0.0018	0.0050		mg/L	1	10/2/2018 11:29:26 PM	B54598
Sodium	15000	82	500		mg/L	500	10/3/2018 7:12:03 PM	A54626
Zinc	0.0064	0.0021	0.010	J	mg/L	1	10/2/2018 11:29:26 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.049	0.0084	0.020	*	mg/L	20	9/21/2018 3:49:47 PM	A54342
Lead	ND	0.0035	0.010		mg/L	20	9/21/2018 3:49:47 PM	A54342
Selenium	0.021	0.015	0.020		mg/L	20	9/21/2018 3:49:47 PM	A54342
Uranium	0.015	0.0019	0.010		mg/L	20	9/21/2018 3:49:47 PM	A54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/28/2018 11:40:45 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.35	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Toluene	ND	0.34	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Ethylbenzene	ND	0.45	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.64	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2,4-Trimethylbenzene	ND	0.51	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,3,5-Trimethylbenzene	ND	0.46	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2-Dichloroethane (EDC)	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2-Dibromoethane (EDB)	ND	0.46	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Naphthalene	ND	0.58	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1-Methylnaphthalene	ND	0.67	4.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
2-Methylnaphthalene	ND	0.48	4.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Acetone	51	1.6	10		µg/L	2	9/14/2018 7:00:17 AM	B54139
Bromobenzene	ND	0.64	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Bromodichloromethane	ND	0.57	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Bromoform	ND	0.65	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Bromomethane	ND	0.51	3.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
2-Butanone	4.3	2.5	10	J	µg/L	2	9/14/2018 7:00:17 AM	B54139
Carbon disulfide	23	0.77	10		µg/L	2	9/14/2018 7:00:17 AM	B54139
Carbon Tetrachloride	ND	0.27	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Chlorobenzene	ND	0.58	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Chloroethane	ND	0.33	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Chloroform	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Chloromethane	ND	0.59	3.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
2-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
4-Chlorotoluene	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
cis-1,2-DCE	ND	0.75	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
cis-1,3-Dichloropropene	ND	0.60	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2-Dibromo-3-chloropropane	ND	0.94	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Dibromochloromethane	ND	0.47	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Dibromomethane	ND	0.64	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2-Dichlorobenzene	ND	0.62	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,3-Dichlorobenzene	ND	0.63	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,4-Dichlorobenzene	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Dichlorodifluoromethane	ND	2.0	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1-Dichloroethane	ND	0.80	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1-Dichloroethene	ND	0.24	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2-Dichloropropane	ND	0.31	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,3-Dichloropropane	ND	0.54	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
2,2-Dichloropropane	ND	0.37	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1-Dichloropropene	ND	0.32	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	1.6	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
2-Hexanone	ND	1.8	10		µg/L	2	9/14/2018 7:00:17 AM	B54139
Isopropylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
4-Isopropyltoluene	ND	0.48	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
4-Methyl-2-pentanone	ND	0.91	10		µg/L	2	9/14/2018 7:00:17 AM	B54139
Methylene Chloride	ND	0.41	3.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
n-Butylbenzene	ND	0.50	3.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
n-Propylbenzene	ND	0.49	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
sec-Butylbenzene	ND	0.40	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Styrene	ND	0.50	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
tert-Butylbenzene	ND	0.44	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1,1,2-Tetrachloroethane	ND	0.50	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1,2,2-Tetrachloroethane	ND	0.66	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Tetrachloroethene (PCE)	ND	0.30	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
trans-1,2-DCE	ND	0.37	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
trans-1,3-Dichloropropene	ND	0.55	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2,3-Trichlorobenzene	ND	0.56	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2,4-Trichlorobenzene	ND	0.53	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1,1-Trichloroethane	ND	0.31	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,1,2-Trichloroethane	ND	0.47	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Trichloroethene (TCE)	ND	0.52	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Trichlorofluoromethane	ND	0.34	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
1,2,3-Trichloropropane	ND	1.1	2.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Vinyl chloride	ND	0.22	1.0		µg/L	2	9/14/2018 7:00:17 AM	B54139
Xylenes, Total	ND	1.3	1.5		µg/L	2	9/14/2018 7:00:17 AM	B54139
Surr: 1,2-Dichloroethane-d4	95.0	0	70-130		%Rec	2	9/14/2018 7:00:17 AM	B54139
Surr: 4-Bromofluorobenzene	95.7	0	70-130		%Rec	2	9/14/2018 7:00:17 AM	B54139
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	2	9/14/2018 7:00:17 AM	B54139
Surr: Toluene-d8	95.0	0	70-130		%Rec	2	9/14/2018 7:00:17 AM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **JME**	
4,4´-DDD	ND	0.45	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
4,4´-DDE	ND	0.45	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
4,4´-DDT	ND	0.45	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Aldrin	ND	0.57	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
alpha-BHC	ND	0.52	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
beta-BHC	ND	0.49	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Chlordane	ND	9.5	10		µg/L	1	9/21/2018 1:50:53 PM	40330
delta-BHC	ND	0.51	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
Dieldrin	ND	0.48	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Endosulfan I	ND	0.38	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Endosulfan II	ND	0.40	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Endosulfan sulfate	ND	0.59	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
Endrin	ND	0.47	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Endrin aldehyde	ND	0.66	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
gamma-BHC	ND	0.50	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
Heptachlor	ND	0.55	0.75		µg/L	1	9/21/2018 1:50:53 PM	40330
Heptachlor epoxide	ND	0.48	0.50		µg/L	1	9/21/2018 1:50:53 PM	40330
Methoxychlor	ND	0.79	0.80		µg/L	1	9/21/2018 1:50:53 PM	40330
Toxaphene	ND	8.9	10		µg/L	1	9/21/2018 1:50:53 PM	40330
Surr: Decachlorobiphenyl	55.8	0	47.2-117		%Rec	1	9/21/2018 1:50:53 PM	40330
Surr: Tetrachloro-m-xylene	64.7	0	26.4-126		%Rec	1	9/21/2018 1:50:53 PM	40330
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Acenaphthylene	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Aniline	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Anthracene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Azobenzene	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benz(a)anthracene	ND	26	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benzo(a)pyrene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benzo(b)fluoranthene	ND	36	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benzo(k)fluoranthene	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Benzoic acid	32	32	100	J	µg/L	1	9/21/2018 12:46:41 AM	40294
Benzyl alcohol	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Butyl benzyl phthalate	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Carbazole	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Chloroaniline	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Chloronaphthalene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Chlorophenol	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Chrysene	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Di-n-butyl phthalate	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Di-n-octyl phthalate	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Dibenzofuran	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
1,2-Dichlorobenzene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
1,3-Dichlorobenzene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
1,4-Dichlorobenzene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Diethyl phthalate	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Dimethyl phthalate	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4-Dichlorophenol	ND	29	100		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4-Dimethylphenol	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4-Dinitrophenol	ND	19	100		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4-Dinitrotoluene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2,6-Dinitrotoluene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Fluoranthene	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Fluorene	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Hexachlorobenzene	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Hexachlorobutadiene	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Hexachloroethane	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Isophorone	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
1-Methylnaphthalene	ND	35	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Methylnaphthalene	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Methylphenol	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
3+4-Methylphenol	41	27	50	J	µg/L	1	9/21/2018 12:46:41 AM	40294
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	9/21/2018 12:46:41 AM	40294
N-Nitrosodimethylamine	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Naphthalene	ND	25	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Nitroaniline	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
3-Nitroaniline	ND	34	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Nitroaniline	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Nitrobenzene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2-Nitrophenol	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
4-Nitrophenol	ND	28	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Pentachlorophenol	ND	26	100		µg/L	1	9/21/2018 12:46:41 AM	40294
Phenanthrene	ND	30	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Phenol	37	30	50	J	µg/L	1	9/21/2018 12:46:41 AM	40294
Pyrene	ND	33	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Pyridine	ND	27	50		µg/L	1	9/21/2018 12:46:41 AM	40294
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	9/21/2018 12:46:41 AM	40294
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	9/21/2018 12:46:41 AM	40294
Surr: 2-Fluorophenol	43.2	0	15-74.1		%Rec	1	9/21/2018 12:46:41 AM	40294
Surr: Phenol-d5	40.5	0	15-59.8		%Rec	1	9/21/2018 12:46:41 AM	40294
Surr: 2,4,6-Tribromophenol	68.9	0	22.1-112		%Rec	1	9/21/2018 12:46:41 AM	40294
Surr: Nitrobenzene-d5	63.3	0	33.2-94		%Rec	1	9/21/2018 12:46:41 AM	40294
Surr: 2-Fluorobiphenyl	59.3	0	34-90.9		%Rec	1	9/21/2018 12:46:41 AM	40294
Surr: 4-Terphenyl-d14	78.4	0	15-149		%Rec	1	9/21/2018 12:46:41 AM	40294

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	36	0.59	2.0	*	mg/L	20	9/10/2018 11:33:02 PM	R54060
Chloride	3800	91	250		mg/L	500	9/26/2018 5:01:01 AM	A54419
Bromide	2.2	0.13	0.50		mg/L	5	9/10/2018 11:20:10 PM	R54060
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/10/2018 11:20:10 PM	R54060
Sulfate	1400	100	250		mg/L	500	9/26/2018 5:01:01 AM	A54419
Nitrate+Nitrite as N	ND	5.5	20		mg/L	100	9/26/2018 4:23:47 AM	A54419

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.16	0.0010	0.0020		mg/L	1	9/19/2018 2:57:09 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 2:57:09 PM	40362
Chromium	0.0038	0.0018	0.0060	J	mg/L	1	9/19/2018 2:57:09 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	10/1/2018 10:31:51 AM	40565
Iron	0.18	0.010	0.020		mg/L	1	9/17/2018 4:06:08 PM	40362
Manganese	0.27	0.0011	0.0020	*	mg/L	1	9/17/2018 4:06:08 PM	40362
Silver	0.0068	0.0012	0.0050		mg/L	1	9/19/2018 2:57:09 PM	40362
Zinc	0.0035	0.0033	0.010	J	mg/L	1	9/19/2018 2:57:09 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.017	0.0021	0.0050	*	mg/L	5	9/18/2018 3:09:21 PM	40362
Lead	ND	0.0023	0.0050		mg/L	10	9/19/2018 12:39:06 PM	40362
Selenium	0.0059	0.0049	0.0050		mg/L	5	9/18/2018 3:09:21 PM	40362
Uranium	0.0017	0.00068	0.0050	J	mg/L	10	9/19/2018 12:39:06 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00011	0.000038	0.00020	J	mg/L	1	9/28/2018 11:42:59 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date: 9/7/2018 11:30:00 AM
Lab ID: 1809409-016E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.16	0.00099	0.0020		mg/L	1	10/2/2018 11:33:41 PM	B54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 11:33:41 PM	B54598
Calcium	280	0.78	10		mg/L	10	10/2/2018 11:35:53 PM	B54598
Chromium	0.0020	0.0013	0.0060	J	mg/L	1	10/2/2018 11:33:41 PM	B54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 11:33:41 PM	B54598
Iron	0.12	0.016	0.020		mg/L	1	10/2/2018 11:33:41 PM	B54598
Magnesium	140	2.5	10		mg/L	10	10/2/2018 11:35:53 PM	B54598
Manganese	0.26	0.00039	0.0020	*	mg/L	1	10/2/2018 11:33:41 PM	B54598
Potassium	560	1.1	10		mg/L	10	10/9/2018 2:58:50 PM	A54767
Silver	0.0073	0.0018	0.0050		mg/L	1	10/2/2018 11:33:41 PM	B54598
Sodium	2500	8.2	50		mg/L	50	10/3/2018 7:14:15 PM	A54626
Zinc	0.0072	0.0021	0.010	J	mg/L	1	10/2/2018 11:33:41 PM	B54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.016	0.0021	0.0050	*	mg/L	5	9/21/2018 3:52:10 PM	A54342
Lead	ND	0.00087	0.0025		mg/L	5	9/21/2018 3:52:10 PM	A54342
Selenium	0.0041	0.0038	0.0050	J	mg/L	5	9/21/2018 3:52:10 PM	A54342
Uranium	0.0012	0.00048	0.0025	J	mg/L	5	9/21/2018 3:52:10 PM	A54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000066	0.000038	0.00020	J	mg/L	1	9/28/2018 11:45:13 AM	40618

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date:
Lab ID: 1809409-017A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/12/2018 12:45:51 PM	GW540
Surr: BFB	92.8	0	69.3-150		%Rec	1	9/12/2018 12:45:51 PM	GW540
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Acetone	3.2	0.79	10	J	µg/L	1	9/13/2018 7:17:37 PM	B54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 7:17:37 PM	B54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 7:17:37 PM	B54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: 3rd Quarter 2018 Groundwater and Pond Sa
Collection Date:
Lab ID: 1809409-017A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 7:17:37 PM	B54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 7:17:37 PM	B54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 7:17:37 PM	B54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 7:17:37 PM	B54139
Surr: 1,2-Dichloroethane-d4	89.5	0	70-130		%Rec	1	9/13/2018 7:17:37 PM	B54139
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	9/13/2018 7:17:37 PM	B54139
Surr: Dibromofluoromethane	88.2	0	70-130		%Rec	1	9/13/2018 7:17:37 PM	B54139
Surr: Toluene-d8	99.3	0	70-130		%Rec	1	9/13/2018 7:17:37 PM	B54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0520		0.00500	1	09/13/2018 10:20	WG[illegible]

Method Blank (MB)

(MB) R3341580-1 09/13/18 09:53

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1023975-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1023975-06 09/13/18 10:05 • (DUP) R3341580-4 09/13/18 10:06

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	U	0.000	1	0.000		20

L1024609-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024609-01 09/13/18 10:22 • (DUP) R3341580-9 09/13/18 10:23

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	0.00678	1	200	J2	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3341580-2 09/13/18 09:54 • (LCSD) R3341580-3 09/13/18 09:55

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.0990	0.105	99.0	105	85.0-115			5.88	20

L1023975-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023975-07 09/13/18 10:08 • (MS) R3341580-5 09/13/18 10:09 • (MSD) R3341580-6 09/13/18 10:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.105	0.104	105	104	1	75.0-125			0.957	20

L1024539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1024539-01 09/13/18 10:15 • (MS) R3341580-7 09/13/18 10:18 • (MSD) R3341580-8 09/13/18 10:19

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.105	0.101	105	101	1	75.0-125			3.88	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. Those results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810854** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	0.12	1.0								J
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	98.0	50	150			J
Cadmium	0.0023	0.0020	0.002000	0	114	50	150			
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0052	0.0060	0.006000	0	86.7	50	150			J
Copper	0.0049	0.0060	0.006000	0	81.0	50	150			J
Iron	0.021	0.020	0.02000	0	103	50	150			
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.53	1.0	0.5000	0	107	50	150			J
Silver	0.0048	0.0050	0.005000	0	95.6	50	150			J
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.5	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	47	1.0	50.00	0	93.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	48	1.0	50.00	0	96.7	85	115			
Manganese	0.48	0.0020	0.5000	0	95.6	85	115			
Potassium	49	1.0	50.00	0	97.1	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.47	0.010	0.5000	0	94.2	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.51	1.0	0.5000	0	101	50	150			J
Potassium	0.44	1.0	0.5000	0	87.9	50	150			J
Sodium	0.66	1.0	0.5000	0	132	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	98.0	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816477** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	100	50	150			
Cadmium	0.0016	0.0020	0.002000	0	81.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816477** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.0059	0.0060	0.006000	0	98.3	50	150			J
Copper	0.0055	0.0060	0.006000	0	91.2	50	150			J
Iron	0.019	0.020	0.02000	0	95.4	50	150			J
Manganese	0.0023	0.0020	0.002000	0	114	50	150			
Silver	0.0052	0.0050	0.005000	0	104	50	150			
Zinc	0.0046	0.010	0.005000	0	92.4	50	150			J

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816848** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.49	0.0060	0.5000	0	98.6	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	97.2	85	115			
Manganese	0.49	0.0020	0.5000	0	97.7	85	115			
Silver	0.092	0.0050	0.1000	0	91.8	85	115			
Zinc	0.48	0.010	0.5000	0	96.0	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	0.55	1.0	0.5000	0	109	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54767**	RunNo: **54767**
Prep Date:	Analysis Date: **10/9/2018**	SeqNo: **1818428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	51	1.0	50.00	0	101	85	115			

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54839**	RunNo: **54839**
Prep Date:	Analysis Date: **10/11/2018**	SeqNo: **1821800** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54839**	RunNo: **54839**
Prep Date:	Analysis Date: **10/11/2018**	SeqNo: **1821801** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.38	1.0	0.5000	0	75.2	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54839**	RunNo: **54839**
Prep Date:	Analysis Date: **10/11/2018**	SeqNo: **1821802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A55001**	RunNo: **55001**
Prep Date:	Analysis Date: **10/18/2018**	SeqNo: **1828216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	0.21	1.0								J
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A55001**	RunNo: **55001**
Prep Date:	Analysis Date: **10/18/2018**	SeqNo: **1828217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.0	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	85.5	50	150			J
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0058	0.0060	0.006000	0	95.8	50	150			J
Copper	0.0056	0.0060	0.006000	0	92.5	50	150			J
Iron	0.018	0.020	0.02000	0	89.3	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.6	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.49	1.0	0.5000	0	98.8	50	150			J
Silver	0.0054	0.0050	0.005000	0	109	50	150			
Zinc	0.0056	0.010	0.005000	0	112	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A55001**	RunNo: **55001**
Prep Date:	Analysis Date: **10/18/2018**	SeqNo: **1828218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.1	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.7	85	115			
Calcium	49	1.0	50.00	0	98.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.6	85	115			
Copper	0.48	0.0060	0.5000	0	95.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A55001**	RunNo: **55001**
Prep Date:	Analysis Date: **10/18/2018**	SeqNo: **1828218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	98.2	85	115			
Manganese	0.48	0.0020	0.5000	0	95.5	85	115			
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.48	0.010	0.5000	0	95.5	85	115			

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A55001**	RunNo: **55001**
Prep Date:	Analysis Date: **10/18/2018**	SeqNo: **1828320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.66	1.0	0.5000	0	132	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MB-40361**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40361**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792033**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40361**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40361**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792035**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	97.5	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.7	50	150			J
Iron	0.028	0.020	0.02000	0	138	50	150			
Manganese	0.0020	0.0020	0.002000	0	97.5	50	150			J
Silver	0.0048	0.0050	0.005000	0	95.2	50	150			J
Zinc	0.0065	0.010	0.005000	0	129	50	150			J

Sample ID	**LCS-40361**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40361**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792037**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.6	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.4	85	115			
Chromium	0.47	0.0060	0.5000	0	94.0	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.48	0.0020	0.5000	0	96.3	85	115			
Silver	0.095	0.0050	0.1000	0	94.8	85	115			
Zinc	0.47	0.010	0.5000	0	94.2	85	115			

Sample ID	**MB-40362**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40362**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792039**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MB-40362**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40362**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792039**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40362**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**40362**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792048**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	86.5	50	150			J
Chromium	0.0052	0.0060	0.006000	0	87.5	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0046	0.0050	0.005000	0	91.6	50	150			J
Zinc	0.0072	0.010	0.005000	0	145	50	150			J

Sample ID	**LCS-40362**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**40362**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792050**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.1	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.4	85	115			
Chromium	0.46	0.0060	0.5000	0	92.8	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Silver	0.094	0.0050	0.1000	0	94.0	85	115			
Zinc	0.46	0.010	0.5000	0	92.5	85	115			

Sample ID	**MB-40361**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**40361**	RunNo:	**54193**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792052**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0060	0.0060								J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**LLLCS-40361**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40361**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792054**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.010	0.0060	0.006000	0	171	50	150			S

Sample ID	**MB-40362**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792056**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0083	0.0060								

Sample ID	**LLLCS-40362**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792058**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.013	0.0060	0.006000	0	215	50	150			BS

Sample ID	**1809409-001DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB12**	Batch ID:	**40361**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792282**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	92.0	70	130			
Cadmium	0.47	0.0020	0.5000	0	93.1	70	130			
Chromium	0.46	0.0060	0.5000	0	91.3	70	130			
Iron	0.50	0.020	0.5000	0	99.5	70	130			
Manganese	0.48	0.0020	0.5000	0	95.2	70	130			
Silver	0.089	0.0050	0.1000	0	88.7	70	130			
Zinc	0.46	0.010	0.5000	0	93.0	70	130			

Sample ID	**1809409-001DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB12**	Batch ID:	**40361**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792283**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.0	70	130	3.22	20	
Cadmium	0.48	0.0020	0.5000	0	96.3	70	130	3.38	20	
Chromium	0.47	0.0060	0.5000	0	93.9	70	130	2.81	20	
Iron	0.51	0.020	0.5000	0	101	70	130	1.64	20	
Manganese	0.49	0.0020	0.5000	0	97.9	70	130	2.81	20	
Silver	0.092	0.0050	0.1000	0	92.1	70	130	3.77	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**1809409-001DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB12**	Batch ID:	**40361**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792283**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0	95.7	70	130	2.92	20	

Sample ID	**1809409-013DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792319**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1806	86.8	70	130			
Iron	0.50	0.020	0.5000	0.06952	85.7	70	130			
Silver	0.13	0.0050	0.1000	0.01405	114	70	130			

Sample ID	**1809409-013DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792320**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.61	0.0020	0.5000	0.1806	85.6	70	130	0.978	20	
Iron	0.50	0.020	0.5000	0.06952	85.4	70	130	0.330	20	
Silver	0.13	0.0050	0.1000	0.01405	112	70	130	1.59	20	

Sample ID	**1809409-013DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792322**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.8	0.010	0.5000	1.273	97.1	70	130			

Sample ID	**1809409-013DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792323**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	1.8	0.010	0.5000	1.273	96.1	70	130	0.290	20	

Sample ID	**1809409-013DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54270**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795726**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**1809409-013DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54270**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795726**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.44	0.0060	0.5000	0.006910	87.1	70	130			
Copper	0.60	0.0060	0.5000	0	120	70	130			
Zinc	0.40	0.010	0.5000	0.005480	78.2	70	130			

Sample ID	**1809409-013DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**EP-9**	Batch ID:	**40362**		RunNo:	**54270**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795727**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130	0.504	20	
Chromium	0.45	0.0060	0.5000	0.006910	88.5	70	130	1.50	20	
Copper	0.59	0.0060	0.5000	0	118	70	130	1.41	20	
Zinc	0.40	0.010	0.5000	0.005480	78.9	70	130	0.894	20	

Sample ID	**MB-40361**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40361**		RunNo:	**54309**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/20/2018**		SeqNo:	**1797075**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID	**LLLCS-40361**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40361**		RunNo:	**54309**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/20/2018**		SeqNo:	**1797076**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0087	0.0060	0.006000	0	145	50	150			

Sample ID	**LCS-40361**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**40361**		RunNo:	**54309**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/20/2018**		SeqNo:	**1797077**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.9	85	115			

Sample ID	**1809409-001DMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB12**	Batch ID:	**40361**		RunNo:	**54309**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/20/2018**		SeqNo:	**1797317**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**1809409-001DMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**FB12**	Batch ID: **40361**			RunNo: **54309**					
Prep Date:	**9/14/2018**	Analysis Date: **9/20/2018**			SeqNo: **1797317**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	97.5	70	130			

Sample ID	**1809409-001DMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**FB12**	Batch ID: **40361**			RunNo: **54309**					
Prep Date:	**9/14/2018**	Analysis Date: **9/20/2018**			SeqNo: **1797318**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.50	0.0060	0.5000	0	101	70	130	3.30	20	

Sample ID	**MB-40565**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **40565**			RunNo: **54547**					
Prep Date:	**9/25/2018**	Analysis Date: **10/1/2018**			SeqNo: **1808418**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID	**LLLCS-40565**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **40565**			RunNo: **54547**					
Prep Date:	**9/25/2018**	Analysis Date: **10/1/2018**			SeqNo: **1808419**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0065	0.0060	0.006000	0	108	50	150			

Sample ID	**LCS-40565**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **40565**			RunNo: **54547**					
Prep Date:	**9/25/2018**	Analysis Date: **10/1/2018**			SeqNo: **1808420**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.52	0.0060	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-A**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798636** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.3	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.8	50	150			J
Selenium	0.00092	0.0010	0.001000	0	91.6	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	101	50	150			

Sample ID **MSLCS-A**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798637** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.6	85	115			
Lead	0.012	0.00050	0.01250	0	97.5	85	115			
Selenium	0.024	0.0010	0.02500	0	96.9	85	115			
Uranium	0.012	0.00050	0.01250	0	97.1	85	115			

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798641** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-C**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54342**	RunNo: **54342**
Prep Date:	Analysis Date: **9/21/2018**	SeqNo: **1798642** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MSLLLCS-C**	SampType: **LCSLL**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **C54342**		RunNo: **54342**					
Prep Date:		Analysis Date: **9/21/2018**		SeqNo: **1798642**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.2	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.6	50	150			J
Uranium	0.00050	0.00050	0.0005000	0	99.5	50	150			J

Sample ID	**MSLCS-C**	SampType: **LCS**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **C54342**		RunNo: **54342**					
Prep Date:		Analysis Date: **9/21/2018**		SeqNo: **1798643**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.4	85	115			
Lead	0.012	0.00050	0.01250	0	96.2	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	94.8	85	115			

Sample ID	**1809409-001EMSLL**	SampType: **MS**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**FB12**	Batch ID: **C54342**		RunNo: **54342**					
Prep Date:		Analysis Date: **9/21/2018**		SeqNo: **1798681**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	70	130			
Lead	0.012	0.00050	0.01250	0	96.0	70	130			
Selenium	0.024	0.0010	0.02500	0	96.6	70	130			
Uranium	0.013	0.00050	0.01250	0	100	70	130			

Sample ID	**1809409-001EMSDL**	SampType: **MSD**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**FB12**	Batch ID: **C54342**		RunNo: **54342**					
Prep Date:		Analysis Date: **9/21/2018**		SeqNo: **1798682**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.9	70	130	0.859	20	
Lead	0.012	0.00050	0.01250	0	95.0	70	130	1.06	20	
Selenium	0.024	0.0010	0.02500	0	96.5	70	130	0.149	20	
Uranium	0.012	0.00050	0.01250	0	97.2	70	130	3.12	20	

Sample ID	**1809409-002EMSLL**	SampType: **MS**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**EB12**	Batch ID: **C54342**		RunNo: **54342**					
Prep Date:		Analysis Date: **9/21/2018**		SeqNo: **1798684**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**1809409-002EMSLL**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**EB12**	Batch ID:	**C54342**		RunNo:	**54342**				
Prep Date:		Analysis Date:	**9/21/2018**		SeqNo:	**1798684**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.5	70	130			
Lead	0.012	0.00050	0.01250	0	94.5	70	130			
Selenium	0.024	0.0010	0.02500	0	96.8	70	130			
Uranium	0.012	0.00050	0.01250	0	96.5	70	130			

Sample ID	**MB-B**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**PBW**	Batch ID:	**B54404**		RunNo:	**54404**				
Prep Date:		Analysis Date:	**9/25/2018**		SeqNo:	**1801651**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**BatchQC**	Batch ID:	**B54404**		RunNo:	**54404**				
Prep Date:		Analysis Date:	**9/25/2018**		SeqNo:	**1801652**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00093	0.0010	0.001000	0	93.4	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.2	50	150			J
Selenium	0.00090	0.0010	0.001000	0	89.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**				
Client ID:	**LCSW**	Batch ID:	**B54404**		RunNo:	**54404**				
Prep Date:		Analysis Date:	**9/25/2018**		SeqNo:	**1801653**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.4	85	115			
Lead	0.012	0.00050	0.01250	0	93.8	85	115			
Selenium	0.023	0.0010	0.02500	0	92.0	85	115			
Uranium	0.012	0.00050	0.01250	0	93.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**
23-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MB-40361**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40361**		RunNo: **54234**					
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793518**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40361**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40361**		RunNo: **54234**					
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793519**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	95.2	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.00093	0.0010	0.001000	0	92.8	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	90.1	50	150			J

Sample ID	**MSLCS-40361**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID: **40361**		RunNo: **54234**					
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793520**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.2	85	115			
Lead	0.012	0.00050	0.01250	0	96.2	85	115			
Selenium	0.023	0.0010	0.02500	0	93.6	85	115			
Uranium	0.011	0.00050	0.01250	0	90.8	85	115			

Sample ID	**MB-40362**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID: **40362**		RunNo: **54234**					
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793521**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40362**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID: **40362**		RunNo: **54234**					
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793522**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MSLLLCS-40362**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**BatchQC**	Batch ID: **40362**		RunNo: **54234**						
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793522**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.1	50	150			J

Sample ID	**MSLCS-40362**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **40362**		RunNo: **54234**						
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793523**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	93.1	85	115			

Sample ID	**1809409-002DMSLL**	SampType: **MSLL**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**EB12**	Batch ID: **40361**		RunNo: **54234**						
Prep Date:	**9/14/2018**	Analysis Date: **9/18/2018**		SeqNo: **1793548**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.4	70	130			
Lead	0.012	0.00050	0.01250	0	97.0	70	130			
Selenium	0.024	0.0010	0.02500	0	95.8	70	130			
Uranium	0.012	0.00050	0.01250	0	97.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MB-40617**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40617**			RunNo: **54501**					
Prep Date:	**9/26/2018**	Analysis Date: **9/28/2018**			SeqNo: **1806843**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000073	0.00020								J

Sample ID	**LCS-40617**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40617**			RunNo: **54501**					
Prep Date:	**9/26/2018**	Analysis Date: **9/28/2018**			SeqNo: **1806844**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.9	80	120			

Sample ID	**MB-40617**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40617**			RunNo: **54501**					
Prep Date:	**9/26/2018**	Analysis Date: **9/28/2018**			SeqNo: **1806871**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00014	0.00020								J

Sample ID	**LCS-40617**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40617**			RunNo: **54501**					
Prep Date:	**9/26/2018**	Analysis Date: **9/28/2018**			SeqNo: **1806872**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0056	0.00020	0.005000	0	113	80	120			

Sample ID	**MB-40731**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **40731**			RunNo: **54581**					
Prep Date:	**10/2/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809692**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000062	0.00020								J

Sample ID	**LCS-40731**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **40731**			RunNo: **54581**					
Prep Date:	**10/2/2018**	Analysis Date: **10/2/2018**			SeqNo: **1809693**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	94.3	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**1809409-001DMS**	SampType:	**MS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB12**	Batch ID:	**40731**		RunNo:	**54581**					
Prep Date:	**10/2/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809695**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0045	0.00020	0.005000	.00004620	89.1	75	125				

Sample ID	**1809409-001DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**FB12**	Batch ID:	**40731**		RunNo:	**54581**					
Prep Date:	**10/2/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809696**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0043	0.00020	0.005000	.00004620	84.7	75	125	5.02	20		

Sample ID	**1809409-011DMS**	SampType:	**MS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**EP-7**	Batch ID:	**40731**		RunNo:	**54581**					
Prep Date:	**10/2/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809700**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0012	0.00020	0.005000	.00004102	23.6	75	125			S	

Sample ID	**1809409-011DMSD**	SampType:	**MSD**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**EP-7**	Batch ID:	**40731**		RunNo:	**54581**					
Prep Date:	**10/2/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1809701**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0011	0.00020	0.005000	.00004102	21.5	75	125	8.81	20	S	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54060**	RunNo: **54060**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1786287** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54060**	RunNo: **54060**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1786288** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Chloride	5.0	0.50	5.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	101	90	110			
Sulfate	10	0.50	10.00	0	102	90	110			

Sample ID **1809409-001CMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB12**	Batch ID: **R54060**	RunNo: **54060**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1786290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.8	66.7	127			
Chloride	4.9	0.50	5.000	0.1200	94.7	77.5	116			
Bromide	2.5	0.10	2.500	0	98.8	80.2	111			
Sulfate	10	0.50	10.00	0	99.7	74.9	123			

Sample ID **1809409-001CMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB12**	Batch ID: **R54060**	RunNo: **54060**
Prep Date:	Analysis Date: **9/10/2018**	SeqNo: **1786291** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.5	66.7	127	0.370	20	
Chloride	4.8	0.50	5.000	0.1200	94.6	77.5	116	0.0999	20	
Bromide	2.5	0.10	2.500	0	98.4	80.2	111	0.418	20	
Sulfate	10	0.50	10.00	0	99.6	74.9	123	0.0623	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**
23-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801260** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801261** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.4	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54419**	RunNo: **54419**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54419**	RunNo: **54419**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1803022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.1	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A54419**	RunNo: **54419**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1803095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54419**	RunNo: **54419**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1803096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54419**	RunNo: **54419**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1803096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.7	0.50	10.00	0	96.7	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54492**	RunNo: **54492**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1806380** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54492**	RunNo: **54492**
Prep Date:	Analysis Date: **9/26/2018**	SeqNo: **1806381** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54566**	RunNo: **54566**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1809194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54566**	RunNo: **54566**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1809195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.5	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	90	110			

Sample ID **181032-001BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R54566**	RunNo: **54566**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1809218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**181032-001BMS**	SampType:	**ms**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R54566**		RunNo:	**54566**				
Prep Date:		Analysis Date:	**10/1/2018**		SeqNo:	**1809218**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.85	0.10	0.5000	0.3638	97.7	66.7	127			
Bromide	2.6	0.10	2.500	0.1607	97.1	80.2	111			
Phosphorus, Orthophosphate (As P	6.3	0.50	5.000	1.531	94.8	80.7	113			

Sample ID	**181032-001BMSD**	SampType:	**msd**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**BatchQC**	Batch ID:	**R54566**		RunNo:	**54566**				
Prep Date:		Analysis Date:	**10/1/2018**		SeqNo:	**1809219**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.83	0.10	0.5000	0.3638	93.9	66.7	127	2.27	20	
Bromide	2.5	0.10	2.500	0.1607	92.4	80.2	111	4.70	20	
Phosphorus, Orthophosphate (As P	6.1	0.50	5.000	1.531	90.5	80.7	113	3.50	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID	**MB-40238**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40238**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785820**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40238**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40238**	RunNo:	**54050**					
Prep Date:	**9/10/2018**	Analysis Date:	**9/10/2018**	SeqNo:	**1785822**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.087	0.010	0.1000	0	86.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **1809409-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB12**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787065** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	107	82.8	143			
Surr: DNOP	0.49		0.5000		97.9	76.7	135			

Sample ID **1809409-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB12**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	82.8	143	1.04	20	
Surr: DNOP	0.47		0.5000		93.6	76.7	135	0	0	

Sample ID **LCS-40235**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.9	70	130			
Surr: DNOP	0.46		0.5000		92.8	76.7	135			

Sample ID **MB-40235**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40235**	RunNo: **54034**
Prep Date: **9/10/2018**	Analysis Date: **9/12/2018**	SeqNo: **1787069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		102	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **RB-II**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		98.0	69.3	150			

Sample ID **2.5UG GRO LCS-II**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **AN54067**	RunNo: **54067**
Prep Date:	Analysis Date: **9/11/2018**	SeqNo: **1786954** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	79.5	127			
Surr: BFB	22		20.00		108	69.3	150			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.1	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **GW54096**	RunNo: **54096**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788222** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.59	0.050	0.5000	0	118	79.5	127			
Surr: BFB	21		20.00		105	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **MB-40330**	SampType: **MBLK**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW**	Batch ID: **40330**	RunNo: **54325**
Prep Date: **9/13/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798166** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	0.050								
4,4´-DDE	ND	0.050								
4,4´-DDT	ND	0.050								
Aldrin	ND	0.075								
alpha-BHC	ND	0.075								
beta-BHC	ND	0.050								
Chlordane	ND	1.0								
delta-BHC	ND	0.075								
Dieldrin	ND	0.050								
Endosulfan I	ND	0.050								
Endosulfan II	ND	0.050								
Endosulfan sulfate	ND	0.075								
Endrin	ND	0.050								
Endrin aldehyde	ND	0.075								
gamma-BHC	ND	0.075								
Heptachlor	ND	0.075								
Heptachlor epoxide	ND	0.050								
Methoxychlor	ND	0.080								
Toxaphene	ND	1.0								
Surr: Decachlorobiphenyl	1.8		2.500		71.5	47.2	117			
Surr: Tetrachloro-m-xylene	1.7		2.500		69.7	26.4	126			

Sample ID **LCS-40330**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **40330**	RunNo: **54325**
Prep Date: **9/13/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798167** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.36	0.050	0.5000	0	72.6	48.8	145			
4,4´-DDE	0.33	0.050	0.5000	0	66.1	48.5	139			
4,4´-DDT	0.33	0.050	0.5000	0	66.1	44.7	138			
Aldrin	0.28	0.075	0.5000	0	56.0	29.4	145			
alpha-BHC	0.36	0.075	0.5000	0	71.1	45.4	146			
beta-BHC	0.36	0.050	0.5000	0	72.3	54.6	146			
delta-BHC	0.35	0.075	0.5000	0	70.4	51.6	141			
Dieldrin	0.37	0.050	0.5000	0	73.6	42.7	151			
Endosulfan I	0.35	0.050	0.5000	0	69.3	35.8	132			
Endosulfan II	0.35	0.050	0.5000	0	70.2	43.7	129			
Endosulfan sulfate	0.38	0.075	0.5000	0	76.3	46.2	148			
Endrin	0.37	0.050	0.5000	0	73.9	51.8	142			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LCS-40330**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **40330**	RunNo: **54325**
Prep Date: **9/13/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798167** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin aldehyde	0.33	0.075	0.5000	0	65.3	32.7	158			
gamma-BHC	0.34	0.075	0.5000	0	68.9	45.9	146			
Heptachlor	0.31	0.075	0.5000	0	62.2	33.1	147			
Heptachlor epoxide	0.35	0.050	0.5000	0	70.9	49.9	144			
Methoxychlor	0.37	0.080	0.5000	0	74.1	15	198			
Surr: Decachlorobiphenyl	1.6		2.500		63.1	47.2	117			
Surr: Tetrachloro-m-xylene	1.6		2.500		64.3	26.4	126			

Sample ID **LCSD-40330**	SampType: **LCSD**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSS02**	Batch ID: **40330**	RunNo: **54325**
Prep Date: **9/13/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798168** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.35	0.050	0.5000	0	69.7	48.8	145	4.14	26.4	
4,4´-DDE	0.33	0.050	0.5000	0	65.2	48.5	139	1.42	25.3	
4,4´-DDT	0.32	0.050	0.5000	0	64.3	44.7	138	2.79	31	
Aldrin	0.27	0.075	0.5000	0	54.1	29.4	145	3.33	22.4	
alpha-BHC	0.33	0.075	0.5000	0	66.4	45.4	146	6.83	11.8	
beta-BHC	0.34	0.050	0.5000	0	68.9	54.6	146	4.72	43.2	
delta-BHC	0.34	0.075	0.5000	0	67.8	51.6	141	3.68	9.62	
Dieldrin	0.36	0.050	0.5000	0	71.5	42.7	151	2.92	37.9	
Endosulfan I	0.34	0.050	0.5000	0	67.2	35.8	132	3.07	44.1	
Endosulfan II	0.34	0.050	0.5000	0	67.1	43.7	129	4.42	19.3	
Endosulfan sulfate	0.37	0.075	0.5000	0	73.4	46.2	148	3.93	17.6	
Endrin	0.35	0.050	0.5000	0	70.8	51.8	142	4.30	21.3	
Endrin aldehyde	0.32	0.075	0.5000	0	63.8	32.7	158	2.30	15.7	
gamma-BHC	0.33	0.075	0.5000	0	65.9	45.9	146	4.45	21.6	
Heptachlor	0.30	0.075	0.5000	0	59.1	33.1	147	5.19	25.7	
Heptachlor epoxide	0.34	0.050	0.5000	0	67.7	49.9	144	4.71	12.8	
Methoxychlor	0.35	0.080	0.5000	0	70.8	15	198	4.53	32.3	
Surr: Decachlorobiphenyl	1.5		2.500		58.1	47.2	117	0	20	
Surr: Tetrachloro-m-xylene	1.4		2.500		57.1	26.4	126	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.35	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.26	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.5	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.1	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.5	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	19	1.0	20.00	0	95.3	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790080** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **1809409-016a ms2**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EP-12B**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1790121** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	42	2.0	40.00	0	105	60.5	137			
Toluene	40	2.0	40.00	0	99.5	70	130			
Chlorobenzene	43	2.0	40.00	0	107	70	130			
1,1-Dichloroethene	42	2.0	40.00	0	106	70	130			
Trichloroethene (TCE)	38	2.0	40.00	0	95.2	70	130			
Surr: 1,2-Dichloroethane-d4	19		20.00		94.8	70	130			
Surr: 4-Bromofluorobenzene	19		20.00		92.6	70	130			
Surr: Dibromofluoromethane	20		20.00		97.9	70	130			
Surr: Toluene-d8	20		20.00		99.5	70	130			

Sample ID **1809409-016a msd2**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EP-12B**	Batch ID: **B54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1790122** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	39	2.0	40.00	0	97.9	60.5	137	7.27	20	
Toluene	40	2.0	40.00	0	101	70	130	1.31	20	
Chlorobenzene	40	2.0	40.00	0	100	70	130	6.15	20	
1,1-Dichloroethene	38	2.0	40.00	0	94.9	70	130	10.8	20	
Trichloroethene (TCE)	35	2.0	40.00	0	86.5	70	130	9.64	20	
Surr: 1,2-Dichloroethane-d4	19		20.00		93.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	19		20.00		95.9	70	130	0	0	
Surr: Dibromofluoromethane	19		20.00		93.0	70	130	0	0	
Surr: Toluene-d8	20		20.00		100	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**
23-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **lcs-40294**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797042** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	78	10	100.0	0	77.9	55.1	104			
4-Chloro-3-methylphenol	170	10	200.0	0	84.0	57	115			
2-Chlorophenol	160	10	200.0	0	81.1	43.4	112			
1,4-Dichlorobenzene	82	10	100.0	0	81.8	38	95.2			
2,4-Dinitrotoluene	67	10	100.0	0	66.7	55.1	96.7			
N-Nitrosodi-n-propylamine	93	10	100.0	0	93.5	55	112			
4-Nitrophenol	110	10	200.0	0	54.1	16.6	93			
Pentachlorophenol	110	20	200.0	0	53.2	43.2	104			
Phenol	120	10	200.0	0	61.8	21.3	85.7			
Pyrene	81	10	100.0	0	80.9	64.9	105			
1,2,4-Trichlorobenzene	92	10	100.0	0	91.9	42.6	107			
Surr: 2-Fluorophenol	140		200.0		69.0	15	74.1			
Surr: Phenol-d5	130		200.0		67.0	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.0	22.1	112			
Surr: Nitrobenzene-d5	85		100.0		85.1	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		75.8	34	90.9			
Surr: 4-Terphenyl-d14	91		100.0		90.6	15	149			

Sample ID **mb-40294**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797043** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	7.2	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **mb-40294**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40294**	RunNo: **54296**	
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797043**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **mb-40294**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40294**	RunNo: **54296**
Prep Date: **9/12/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797043** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		58.8	15	74.1			
Surr: Phenol-d5	110		200.0		52.6	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		76.3	22.1	112			
Surr: Nitrobenzene-d5	72		100.0		72.2	33.2	94			
Surr: 2-Fluorobiphenyl	73		100.0		73.5	34	90.9			
Surr: 4-Terphenyl-d14	91		100.0		90.7	15	149			

Sample ID **LCSD-40294**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **40294**	RunNo: **54318**
Prep Date: **9/12/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798878** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.7	55.1	104	1.07	34.9	
4-Chloro-3-methylphenol	140	10	200.0	0	71.1	57	115	16.6	30.2	
2-Chlorophenol	140	10	200.0	0	71.8	43.4	112	12.2	49.5	
1,4-Dichlorobenzene	65	10	100.0	0	64.7	38	95.2	23.4	43.2	
2,4-Dinitrotoluene	72	10	100.0	0	71.7	55.1	96.7	7.23	49.9	
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.4	55	112	10.2	42.1	
4-Nitrophenol	110	10	200.0	0	53.9	16.6	93	0.463	31.5	
Pentachlorophenol	150	20	200.0	0	73.1	43.2	104	31.5	52.5	
Phenol	89	10	200.0	0	44.7	21.3	85.7	32.0	54.4	
Pyrene	87	10	100.0	0	86.9	64.9	105	7.13	30.7	
1,2,4-Trichlorobenzene	76	10	100.0	0	76.4	42.6	107	18.5	48.1	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809409**

23-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater and Pond Sampli

Sample ID **LCSD-40294** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**

Client ID: **LCSS02** Batch ID: **40294** RunNo: **54318**

Prep Date: **9/12/2018** Analysis Date: **9/21/2018** SeqNo: **1798878** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		51.8	15	74.1	0	0	
Surr: Phenol-d5	93		200.0		46.4	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		76.7	22.1	112	0	0	
Surr: Nitrobenzene-d5	71		100.0		71.4	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	73		100.0		72.9	34	90.9	0	0	
Surr: 4-Terphenyl-d14	100		100.0		101	15	149	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1809409 RcptNo: 1

Received By: **Andy Freeman** 9/7/2018 2:30:00 PM

Completed By: **Anne Thorne** 9/10/2018 6:47:27 AM

Reviewed By: 09/10/18

Labeled by: JAB 09/10/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ JAB 09/10/18
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 4&; 1 (<2 or >12 unless noted)
Adjusted? Yes
Checked by: JAB 09/10/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: Per TP_1 Report 1A+ 09/10/18
For 245.1 analysis: Added approx. 1mL HNO3 to 004D container 1 of 1 for preferred pH. Held for 24 hours prior to analysis.

CUSTODY SEALS INTACT ON ALL SAMPLE CONTAINERS/at 9/10/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			
2	1.1	Good	Yes			
3	0.2	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1809409 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	3.3	Good	Yes			
5	1.2	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: see notes

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMBs(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	0910	H_2O	FB12 [redacted]	40ml VOA-5	HCl	001			X							X						
				250 ml Amber-1	Neat	002			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	004												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	006													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430	[signature]	[signature]	9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

0.4C, 1.1C, 0.2C, 3.3C, 4.2C – 5 coolers @ 9/7

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	0925	H_2O	EB12 [redacted]	40ml VOA-5	HCl	202			X							X						
				250 ml Amber-1	Neat	202			X													
				250 ml Plastic-1	HNO_3	202												X				
				125 ml Plastic-1	HNO_3	202												X	X			
				125 ml Plastic-1	H_2SO_4	202													X			
				125 ml Plastic-1	Neat	202													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430	[redacted]	[redacted]	9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	0950	H_2O	STP-1-NW	40ml VOA-5	HCl	203			X							X						
				250 ml Amber-1	Neat	203			X													
				250 ml Plastic-1	HNO_3	203												X				
				125 ml Plastic-1	HNO_3	203												X	X			
				125 ml Plastic-1	H_2SO_4	203													X			
				125 ml Plastic-1	Neat	203													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430				
Date:	Time:	Relinquished by:	Received by:	Date	Time
				9/7/18	1430

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809469	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/6/18	1100	H_2O	OAPIS-1	40ml VOA-5	HCl	001			X							X						
				40ml VOA-3	$Na_2S_2O_3$	002					X											
				1 Liter Amber -2	Neat	003											X					
				250 ml Amber-1	Neat	004			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	006												X	X			
				125 ml Plastic-1	H_2SO_4	007													X			
				125 ml Plastic-1	Neat	008													X			
				500 ml Plastic-1	NaOH	009														X		

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
			DUP13			1809409																
9/6/18	—	H_2O	[redacted]	40ml VOA-5	HCl	205			X							X						
				250 ml Amber-1	Neat	205			X													
				250 ml Plastic-1	HNO_3	205												X				
				125 ml Plastic-1	HNO_3	205												X	X			
				125 ml Plastic-1	H_2SO_4	205													X			
				125 ml Plastic-1	Neat	205													X			
9/6/18	—	H_2O	TRIP BLANK	40 ML VOA 3	HCl	206										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430	[signature]	[signature]	9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	1250	H_2O	EP-2	40ml VOA-3	HCl	206										X						
				1 Liter Amber -2	Neat	206											X						
				250 ml Plastic-1	HNO_3	206												X					
				125 ml Plastic-1	HNO_3	206												X	X				
				125 ml Plastic-1	H_2SO_4	206													X				
				125 ml Plastic-1	Neat	206													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush_____
Project Name: **3rd Quarter 2018 Pond Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Pesticides (8081A)		Air Bubbles (Y or N)
9/6/18	1330	H_2O	EP-3	40ml VOA-X3	HCl	207										X						
				1 Liter Amber 2	Neat	207											X					
				250 ml Plastic-1	HNO_3	207												X				
				125 ml Plastic-1	HNO_3	207												X	X			
				125 ml Plastic-1	H_2SO_4	207													X			
				125 ml Plastic-1	Neat	207													X			
				1 Liter Amber - 1	Neat	207														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	1450	H_2O	EP-4	40ml VOA-3	HCl	208										X						
				1 Liter Amber -1	Neat	208											X						
				250 ml Plastic-1	HNO_3	208												X				
				125 ml Plastic-1	HNO_3	208												X	X			
				125 ml Plastic-1	H_2SO_4	208													X			
				125 ml Plastic-1	Neat	208													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/6/18	1515	H_2O	EP-5	40ml VOA-~~1~~ 3	HCl	009										X						
				1 Liter Amber - 1	Neat	009											X						
				250 ml Plastic-1	HNO_3	009												X				
				125 ml Plastic-1	HNO_3	009												X	X			
				125 ml Plastic-1	H_2SO_4	009													X			
				125 ml Plastic-1	Neat	009													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1436
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/7/18	0805	H_2O	EP-6	40ml VOA-~~4~~ 3	HCl	010										X						
				1 Liter Amber -1	Neat	020											X						
				250 ml Plastic-1	HNO_3	030												X					
				125 ml Plastic-1	HNO_3	040												X	X				
				125 ml Plastic-1	H_2SO_4	050													X				
				125 ml Plastic-1	Neat	060													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/7/18	0840	H_2O	EP-7	40ml VOA-3	HCl	-011										X						
				1 Liter Amber -1	Neat	-011											X						
				250 ml Plastic-1	HNO_3	-011												X				
				125 ml Plastic-1	HNO_3	-011												X	X			
				125 ml Plastic-1	H_2SO_4	-011													X			
				125 ml Plastic-1	Neat	-011													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/7/18	0900	H_2O	EP-8	40ml VOA-3	HCl	012										X						
				1 Liter Amber -1	Neat	02											X					
				250 ml Plastic-1	HNO_3	02												X				
				125 ml Plastic-1	HNO_3	02												X	X			
				125 ml Plastic-1	H_2SO_4	02													X			
				125 ml Plastic-1	Neat	02													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/7/18	0930	H_2O	EP-9	3 40ml VOA-X	HCl	213										X						
				1 Liter Amber -1	Neat	213											X						
				250 ml Plastic-1	HNO_3	213												X				
				125 ml Plastic-1	HNO_3	213												X	X			
				125 ml Plastic-1	H_2SO_4	213													X			
				125 ml Plastic-1	Neat	213													X			

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/7/18	1025	H_2O	EP-11	40ml VOA ~~1~~ 3	HCl	014										X						
				1 Liter Amber -1	Neat	014											X						
				250 ml Plastic-1	HNO_3	014												X					
				125 ml Plastic-1	HNO_3	014												X	X				
				125 ml Plastic-1	H_2SO_4	014													X				
				125 ml Plastic-1	Neat	014													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard **X** Level 4 (Full Validation)
☐ Other _____
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush _____
Project Name: **3rd Quarter 2018**
Pond Sampling
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☐ Yes ☐ No
Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Pesticides (8081A)		Air Bubbles (Y or N)
9/7/18	1100	H_2O	EP-12A	40ml VOA-3	HCl	015										X						
				1 Liter Amber -1	Neat	015											X					
				250 ml Plastic-1	HNO_3	015												X				
				125 ml Plastic-1	HNO_3	015												X	X			
				125 ml Plastic-1	H_2SO_4	015													X			
				125 ml Plastic-1	Neat	015													X			
				1 Liter Amber - 1	Neat	015														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Analysis Request

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018**

Pond Sampling

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809409	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH (Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	Pesticides (8081A)		Air Bubbles (Y or N)
9/7/18	1130	H_2O	EP-12B	40ml VOA (3)	HCl	-016										X						
				1 Liter Amber -1	Neat	-016											X					
				250 ml Plastic-1	HNO_3	-016												X				
				125 ml Plastic-1	HNO_3	-016												X	X			
				125 ml Plastic-1	H_2SO_4	-016													X			
				125 ml Plastic-1	Neat	-016													X			
				1 Liter Amber - 1	Neat	-016														X		
			TripBlank			09110119			X							X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/7/18	1430			9/7/18	1430
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0520		0.00500	1	09/13/2018 10:20	WG1164707

Method Blank (MB)

(MB) R3341580-1 09/13/18 09:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1023975-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1023975-06 09/13/18 10:05 • (DUP) R3341580-4 09/13/18 10:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.000	1	0.000		20

L1024609-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1024609-01 09/13/18 10:22 • (DUP) R3341580-9 09/13/18 10:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00678	1	200	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3341580-2 09/13/18 09:54 • (LCSD) R3341580-3 09/13/18 09:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.0990	0.105	99.0	105	85.0-115			5.88	20

L1023975-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023975-07 09/13/18 10:08 • (MS) R3341580-5 09/13/18 10:09 • (MSD) R3341580-6 09/13/18 10:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.105	0.104	105	104	1	75.0-125			0.957	20

L1024539-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1024539-01 09/13/18 10:15 • (MS) R3341580-7 09/13/18 10:18 • (MSD) R3341580-8 09/13/18 10:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.105	0.101	105	101	1	75.0-125			3.88	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 11, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1809583

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/12/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Acetone	13	0.79	10		µg/L	1	9/13/2018 2:51:38 PM	A54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 2:51:38 PM	A54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 2:51:38 PM	A54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 2:51:38 PM	A54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 2:51:38 PM	A54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 2:51:38 PM	A54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 2:51:38 PM	A54139
Surr: 1,2-Dichloroethane-d4	92.7	0	70-130		%Rec	1	9/13/2018 2:51:38 PM	A54139
Surr: 4-Bromofluorobenzene	98.3	0	70-130		%Rec	1	9/13/2018 2:51:38 PM	A54139
Surr: Dibromofluoromethane	89.9	0	70-130		%Rec	1	9/13/2018 2:51:38 PM	A54139
Surr: Toluene-d8	90.2	0	70-130		%Rec	1	9/13/2018 2:51:38 PM	A54139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/13/2018 2:51:38 PM	C54139
Surr: BFB	90.8	0	70-130		%Rec	1	9/13/2018 2:51:38 PM	C54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/15/2018 10:28:47 AM	40328
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/15/2018 10:28:47 AM	40328
Surr: DNOP	78.6	0	76.7-135		%Rec	1	9/15/2018 10:28:47 AM	40328

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Acenaphthylene	ND	6.2	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Aniline	ND	6.2	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Anthracene	ND	5.7	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Azobenzene	ND	6.7	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzoic acid	ND	6.3	20		µg/L	1	9/21/2018 3:30:49 PM	40375
Benzyl alcohol	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Carbazole	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Chloroaniline	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Chlorophenol	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Chrysene	ND	6.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Dibenzofuran	ND	6.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Diethyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Fluoranthene	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Fluorene	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Hexachloroethane	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Isophorone	ND	6.2	10		µg/L	1	9/21/2018 3:30:49 PM	40375
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Methylphenol	ND	6.3	10		µg/L	1	9/21/2018 3:30:49 PM	40375
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/21/2018 3:30:49 PM	40375
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Naphthalene	ND	5.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Nitroaniline	ND	5.9	10		µg/L	1	9/21/2018 3:30:49 PM	40375
3-Nitroaniline	ND	6.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Nitroaniline	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Nitrobenzene	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2-Nitrophenol	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
4-Nitrophenol	ND	5.6	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Pentachlorophenol	ND	5.3	20		µg/L	1	9/21/2018 3:30:49 PM	40375
Phenanthrene	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Phenol	ND	6.0	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Pyrene	ND	6.5	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Pyridine	ND	5.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/21/2018 3:30:49 PM	40375
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/21/2018 3:30:49 PM	40375
Surr: 2-Fluorophenol	39.6	0	15-74.1		%Rec	1	9/21/2018 3:30:49 PM	40375
Surr: Phenol-d5	33.4	0	15-59.8		%Rec	1	9/21/2018 3:30:49 PM	40375
Surr: 2,4,6-Tribromophenol	77.6	0	22.1-112		%Rec	1	9/21/2018 3:30:49 PM	40375
Surr: Nitrobenzene-d5	64.0	0	33.2-94		%Rec	1	9/21/2018 3:30:49 PM	40375
Surr: 2-Fluorobiphenyl	61.7	0	34-90.9		%Rec	1	9/21/2018 3:30:49 PM	40375
Surr: 4-Terphenyl-d14	94.5	0	15-149		%Rec	1	9/21/2018 3:30:49 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.031	0.10		mg/L	1	9/12/2018 10:45:29 AM	R54117
Chloride	ND	0.18	0.50		mg/L	1	9/12/2018 10:45:29 AM	R54117
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	9/12/2018 10:45:29 AM	R54117
Bromide	ND	0.027	0.10		mg/L	1	9/12/2018 10:45:29 AM	R54117
Nitrogen, Nitrate (As N)	0.22	0.0066	0.10		mg/L	1	9/12/2018 10:45:29 AM	R54117
Phosphorus, Orthophosphate (As P)	0.17	0.093	0.50	J	mg/L	1	9/12/2018 10:45:29 AM	R54117
Sulfate	0.65	0.21	0.50		mg/L	1	9/12/2018 10:45:29 AM	R54117

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/2/2018 8:19:49 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:19:49 PM	A54598
Calcium	ND	0.078	1.0		mg/L	1	10/2/2018 8:19:49 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:19:49 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:19:49 PM	A54598
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 8:19:49 PM	A54598
Magnesium	ND	0.25	1.0		mg/L	1	10/2/2018 8:19:49 PM	A54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 8:19:49 PM	A54598
Potassium	0.86	0.11	1.0	J	mg/L	1	10/2/2018 8:19:49 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:19:49 PM	A54598
Sodium	5.6	0.16	1.0		mg/L	1	10/2/2018 8:19:49 PM	A54598
Zinc	0.0072	0.0021	0.010	J	mg/L	1	10/2/2018 8:19:49 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/25/2018 1:08:18 PM	B54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 1:08:18 PM	B54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 1:08:18 PM	B54404
Uranium	ND	0.000096	0.00050		mg/L	1	9/25/2018 1:08:18 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	9/26/2018 3:44:10 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 1:20:00 PM
Lab ID: 1809583-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	9/19/2018 2:59:20 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 2:59:20 PM	40362
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2018 2:59:20 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 2:59:20 PM	40362
Iron	ND	0.010	0.020		mg/L	1	9/17/2018 4:10:28 PM	40362
Manganese	ND	0.0011	0.0020		mg/L	1	9/17/2018 4:10:28 PM	40362
Silver	ND	0.0012	0.0050		mg/L	1	9/19/2018 2:59:20 PM	40362
Zinc	ND	0.0033	0.010		mg/L	1	9/19/2018 2:59:20 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/18/2018 3:18:38 PM	40362
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 3:18:38 PM	40362
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 3:18:38 PM	40362
Uranium	ND	0.000068	0.00050		mg/L	1	9/18/2018 3:18:38 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000050	0.000038	0.00020	J	mg/L	1	9/26/2018 3:51:05 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Methyl tert-butyl ether (MTBE)	30	0.32	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2-Dichloroethane (EDC)	0.56	0.40	1.0	J	µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Acetone	3.7	0.79	10	J	µg/L	1	9/13/2018 3:21:19 PM	A54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 3:21:19 PM	A54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 3:21:19 PM	A54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1-Dichloroethane	0.78	0.40	1.0	J	µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 3:21:19 PM	A54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 3:21:19 PM	A54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 3:21:19 PM	A54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 3:21:19 PM	A54139
Surr: 1,2-Dichloroethane-d4	98.5	0	70-130		%Rec	1	9/13/2018 3:21:19 PM	A54139
Surr: 4-Bromofluorobenzene	92.9	0	70-130		%Rec	1	9/13/2018 3:21:19 PM	A54139
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	1	9/13/2018 3:21:19 PM	A54139
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	9/13/2018 3:21:19 PM	A54139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.024	0.0097	0.050	J	mg/L	1	9/13/2018 3:21:19 PM	C54139
Surr: BFB	90.7	0	70-130		%Rec	1	9/13/2018 3:21:19 PM	C54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/15/2018 11:42:51 AM	40328
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/15/2018 11:42:51 AM	40328
Surr: DNOP	81.9	0	76.7-135		%Rec	1	9/15/2018 11:42:51 AM	40328

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Acenaphthylene	ND	6.2	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Aniline	ND	6.2	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Anthracene	ND	5.7	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Azobenzene	ND	6.7	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Benzoic acid	6.4	6.3	20	J	µg/L	1	9/21/2018 4:00:10 PM	40375
Benzyl alcohol	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Carbazole	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Chloroaniline	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Chlorophenol	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Chrysene	ND	6.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Dibenzofuran	ND	6.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Diethyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Fluoranthene	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Fluorene	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Hexachloroethane	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Isophorone	ND	6.2	10		µg/L	1	9/21/2018 4:00:10 PM	40375
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Methylphenol	ND	6.3	10		µg/L	1	9/21/2018 4:00:10 PM	40375
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/21/2018 4:00:10 PM	40375
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Naphthalene	ND	5.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Nitroaniline	ND	5.9	10		µg/L	1	9/21/2018 4:00:10 PM	40375
3-Nitroaniline	ND	6.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Nitroaniline	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Nitrobenzene	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2-Nitrophenol	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
4-Nitrophenol	ND	5.6	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Pentachlorophenol	ND	5.3	20		µg/L	1	9/21/2018 4:00:10 PM	40375
Phenanthrene	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Phenol	ND	6.0	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Pyrene	ND	6.5	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Pyridine	ND	5.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/21/2018 4:00:10 PM	40375
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/21/2018 4:00:10 PM	40375
Surr: 2-Fluorophenol	29.1	0	15-74.1		%Rec	1	9/21/2018 4:00:10 PM	40375
Surr: Phenol-d5	23.5	0	15-59.8		%Rec	1	9/21/2018 4:00:10 PM	40375
Surr: 2,4,6-Tribromophenol	55.5	0	22.1-112		%Rec	1	9/21/2018 4:00:10 PM	40375
Surr: Nitrobenzene-d5	46.9	0	33.2-94		%Rec	1	9/21/2018 4:00:10 PM	40375
Surr: 2-Fluorobiphenyl	45.2	0	34-90.9		%Rec	1	9/21/2018 4:00:10 PM	40375
Surr: 4-Terphenyl-d14	79.5	0	15-149		%Rec	1	9/21/2018 4:00:10 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.16	0.50		mg/L	5	9/12/2018 11:11:12 AM	R54117
Chloride	1300	18	50		mg/L	100	10/1/2018 8:14:43 PM	A54568
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/12/2018 11:11:12 AM	R54117
Bromide	1.0	0.13	0.50		mg/L	5	9/12/2018 11:11:12 AM	R54117
Nitrogen, Nitrate (As N)	0.080	0.033	0.50	J	mg/L	5	9/12/2018 11:11:12 AM	R54117
Phosphorus, Orthophosphate (As P)	1.3	0.46	2.5	J	mg/L	5	9/12/2018 11:11:12 AM	R54117
Sulfate	220	1.0	2.5		mg/L	5	9/12/2018 11:11:12 AM	R54117

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.094	0.00099	0.0020		mg/L	1	10/2/2018 8:24:13 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:24:13 PM	A54598
Calcium	54	0.078	1.0		mg/L	1	10/2/2018 8:24:13 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:24:13 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:24:13 PM	A54598
Iron	0.50	0.016	0.020	*	mg/L	1	10/2/2018 8:24:13 PM	A54598
Magnesium	6.8	0.25	1.0		mg/L	1	10/2/2018 8:24:13 PM	A54598
Manganese	0.034	0.00039	0.0020		mg/L	1	10/2/2018 8:24:13 PM	A54598
Potassium	3.3	0.11	1.0		mg/L	1	10/2/2018 8:24:13 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:24:13 PM	A54598
Sodium	1000	3.3	20		mg/L	20	10/3/2018 7:16:28 PM	A54626
Zinc	0.0062	0.0021	0.010	J	mg/L	1	10/2/2018 8:24:13 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00075	0.00042	0.0010	J	mg/L	1	9/25/2018 1:15:17 PM	B54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 1:15:17 PM	B54404
Selenium	0.00093	0.00076	0.0010	J	mg/L	1	9/25/2018 1:15:17 PM	B54404
Uranium	0.038	0.00048	0.0025	*	mg/L	5	9/25/2018 3:02:33 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000081	0.000038	0.00020	J	mg/L	1	9/26/2018 3:53:24 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5C
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 2:35:00 PM
Lab ID: 1809583-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.094	0.0010	0.0020		mg/L	1	9/19/2018 3:01:31 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 3:01:31 PM	40362
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2018 3:01:31 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:01:31 PM	40362
Iron	0.87	0.010	0.020	*	mg/L	1	9/17/2018 4:14:52 PM	40362
Manganese	0.037	0.0011	0.0020		mg/L	1	9/17/2018 4:14:52 PM	40362
Silver	ND	0.0012	0.0050		mg/L	1	9/19/2018 3:01:31 PM	40362
Zinc	ND	0.0033	0.010		mg/L	1	9/19/2018 3:01:31 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/19/2018 12:55:11 PM	40362
Lead	ND	0.0011	0.0025		mg/L	5	9/19/2018 12:55:11 PM	40362
Selenium	ND	0.0049	0.0050		mg/L	5	9/19/2018 12:55:11 PM	40362
Uranium	0.041	0.00034	0.0025	*	mg/L	5	9/19/2018 12:55:11 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00019	0.000038	0.00020	J	mg/L	1	9/26/2018 3:55:34 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Toluene	0.24	0.17	1.0	J	µg/L	1	9/13/2018 3:50:59 PM	A54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Methyl tert-butyl ether (MTBE)	5.2	0.32	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Acetone	1.3	0.79	10	J	µg/L	1	9/13/2018 3:50:59 PM	A54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 3:50:59 PM	A54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 3:50:59 PM	A54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 3:50:59 PM	A54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 3:50:59 PM	A54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 3:50:59 PM	A54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 3:50:59 PM	A54139
Surr: 1,2-Dichloroethane-d4	97.4	0	70-130		%Rec	1	9/13/2018 3:50:59 PM	A54139
Surr: 4-Bromofluorobenzene	97.1	0	70-130		%Rec	1	9/13/2018 3:50:59 PM	A54139
Surr: Dibromofluoromethane	92.2	0	70-130		%Rec	1	9/13/2018 3:50:59 PM	A54139
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	9/13/2018 3:50:59 PM	A54139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.0097	0.050		mg/L	1	9/13/2018 3:50:59 PM	C54139
Surr: BFB	93.8	0	70-130		%Rec	1	9/13/2018 3:50:59 PM	C54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/15/2018 12:07:30 PM	40328
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/15/2018 12:07:30 PM	40328
Surr: DNOP	80.9	0	76.7-135		%Rec	1	9/15/2018 12:07:30 PM	40328

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Acenaphthylene	ND	6.2	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Aniline	ND	6.2	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Anthracene	ND	5.7	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Azobenzene	ND	6.7	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/21/2018 5:28:48 PM	40375
Benzyl alcohol	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Carbazole	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Chloroaniline	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Chlorophenol	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Chrysene	ND	6.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Dibenzofuran	ND	6.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Diethyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Fluoranthene	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Fluorene	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Hexachloroethane	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Isophorone	ND	6.2	10		µg/L	1	9/21/2018 5:28:48 PM	40375
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Methylphenol	ND	6.3	10		µg/L	1	9/21/2018 5:28:48 PM	40375
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/21/2018 5:28:48 PM	40375
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Naphthalene	ND	5.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Nitroaniline	ND	5.9	10		µg/L	1	9/21/2018 5:28:48 PM	40375
3-Nitroaniline	ND	6.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Nitroaniline	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Nitrobenzene	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2-Nitrophenol	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
4-Nitrophenol	ND	5.6	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Pentachlorophenol	ND	5.3	20		µg/L	1	9/21/2018 5:28:48 PM	40375
Phenanthrene	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Phenol	ND	6.0	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Pyrene	ND	6.5	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Pyridine	ND	5.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/21/2018 5:28:48 PM	40375
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/21/2018 5:28:48 PM	40375
Surr: 2-Fluorophenol	54.3	0	15-74.1		%Rec	1	9/21/2018 5:28:48 PM	40375
Surr: Phenol-d5	40.5	0	15-59.8		%Rec	1	9/21/2018 5:28:48 PM	40375
Surr: 2,4,6-Tribromophenol	68.1	0	22.1-112		%Rec	1	9/21/2018 5:28:48 PM	40375
Surr: Nitrobenzene-d5	76.2	0	33.2-94		%Rec	1	9/21/2018 5:28:48 PM	40375
Surr: 2-Fluorobiphenyl	75.3	0	34-90.9		%Rec	1	9/21/2018 5:28:48 PM	40375
Surr: 4-Terphenyl-d14	84.5	0	15-149		%Rec	1	9/21/2018 5:28:48 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.16	0.50		mg/L	5	9/12/2018 11:36:55 AM	R54117
Chloride	330	3.6	10		mg/L	20	9/12/2018 11:49:46 AM	R54117
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/12/2018 11:36:55 AM	R54117
Bromide	0.45	0.13	0.50	J	mg/L	5	9/12/2018 11:36:55 AM	R54117
Nitrogen, Nitrate (As N)	0.19	0.033	0.50	J	mg/L	5	9/12/2018 11:36:55 AM	R54117
Phosphorus, Orthophosphate (As P)	1.0	0.46	2.5	J	mg/L	5	9/12/2018 11:36:55 AM	R54117
Sulfate	91	1.0	2.5		mg/L	5	9/12/2018 11:36:55 AM	R54117

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.099	0.00099	0.0020		mg/L	1	10/2/2018 8:28:47 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:28:47 PM	A54598
Calcium	3.7	0.078	1.0		mg/L	1	10/2/2018 8:28:47 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:28:47 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:28:47 PM	A54598
Iron	0.053	0.016	0.020		mg/L	1	10/2/2018 8:28:47 PM	A54598
Magnesium	0.41	0.25	1.0	J	mg/L	1	10/2/2018 8:28:47 PM	A54598
Manganese	0.0094	0.00039	0.0020		mg/L	1	10/2/2018 8:28:47 PM	A54598
Potassium	1.1	0.11	1.0		mg/L	1	10/2/2018 8:28:47 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:28:47 PM	A54598
Sodium	390	1.6	10		mg/L	10	10/2/2018 8:37:23 PM	A54598
Zinc	0.015	0.0021	0.010		mg/L	1	10/2/2018 8:28:47 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	9/25/2018 1:17:37 PM	B54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 1:17:37 PM	B54404
Selenium	0.0014	0.00076	0.0010		mg/L	1	9/25/2018 1:17:37 PM	B54404
Uranium	0.029	0.00048	0.0025		mg/L	5	9/25/2018 3:04:52 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000082	0.000038	0.00020	J	mg/L	1	9/26/2018 3:57:45 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-5B
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018 3:20:00 PM
Lab ID: 1809583-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.12	0.0010	0.0020		mg/L	1	9/19/2018 3:16:40 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 3:16:40 PM	40362
Chromium	0.0033	0.0018	0.0060	J	mg/L	1	9/19/2018 3:16:40 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	10/3/2018 12:56:37 AM	40620
Iron	1.7	0.051	0.10	*	mg/L	5	9/17/2018 4:42:11 PM	40362
Manganese	0.034	0.0011	0.0020		mg/L	1	9/17/2018 4:19:01 PM	40362
Silver	ND	0.0012	0.0050		mg/L	1	9/19/2018 3:16:40 PM	40362
Zinc	0.0050	0.0033	0.010	J	mg/L	1	9/19/2018 3:16:40 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0014	0.00041	0.0010		mg/L	1	9/18/2018 3:23:13 PM	40362
Lead	0.00052	0.00023	0.00050		mg/L	1	9/18/2018 3:23:13 PM	40362
Selenium	0.0014	0.00098	0.0010		mg/L	1	9/18/2018 3:23:13 PM	40362
Uranium	0.031	0.00034	0.0025	*	mg/L	5	9/19/2018 12:57:29 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000087	0.000038	0.00020	J	mg/L	1	9/26/2018 3:59:57 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Methyl tert-butyl ether (MTBE)	30	0.32	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2-Dichloroethane (EDC)	0.56	0.40	1.0	J	µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Acetone	3.6	0.79	10	J	µg/L	1	9/13/2018 4:20:39 PM	A54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 4:20:39 PM	A54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 4:20:39 PM	A54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1-Dichloroethane	0.76	0.40	1.0	J	µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 4:20:39 PM	A54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 4:20:39 PM	A54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 4:20:39 PM	A54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 4:20:39 PM	A54139
Surr: 1,2-Dichloroethane-d4	97.8	0	70-130		%Rec	1	9/13/2018 4:20:39 PM	A54139
Surr: 4-Bromofluorobenzene	93.3	0	70-130		%Rec	1	9/13/2018 4:20:39 PM	A54139
Surr: Dibromofluoromethane	92.5	0	70-130		%Rec	1	9/13/2018 4:20:39 PM	A54139
Surr: Toluene-d8	94.9	0	70-130		%Rec	1	9/13/2018 4:20:39 PM	A54139
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **DJF**	
Gasoline Range Organics (GRO)	0.027	0.0097	0.050	J	mg/L	1	9/13/2018 4:20:39 PM	C54139
Surr: BFB	94.0	0	70-130		%Rec	1	9/13/2018 4:20:39 PM	C54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/15/2018 12:32:06 PM	40328
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/15/2018 12:32:06 PM	40328
Surr: DNOP	79.5	0	76.7-135		%Rec	1	9/15/2018 12:32:06 PM	40328

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Acenaphthylene	ND	6.2	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Aniline	ND	6.2	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Anthracene	ND	5.7	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Azobenzene	ND	6.7	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzoic acid	ND	6.3	20		µg/L	1	9/21/2018 5:58:11 PM	40375
Benzyl alcohol	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Carbazole	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Chloroaniline	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Chlorophenol	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Chrysene	ND	6.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Dibenzofuran	ND	6.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Diethyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Fluoranthene	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Fluorene	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Hexachloroethane	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Isophorone	ND	6.2	10		µg/L	1	9/21/2018 5:58:11 PM	40375
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Methylphenol	ND	6.3	10		µg/L	1	9/21/2018 5:58:11 PM	40375
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/21/2018 5:58:11 PM	40375
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Naphthalene	ND	5.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Nitroaniline	ND	5.9	10		µg/L	1	9/21/2018 5:58:11 PM	40375
3-Nitroaniline	ND	6.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Nitroaniline	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Nitrobenzene	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2-Nitrophenol	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
4-Nitrophenol	ND	5.6	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Pentachlorophenol	ND	5.3	20		µg/L	1	9/21/2018 5:58:11 PM	40375
Phenanthrene	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Phenol	ND	6.0	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Pyrene	ND	6.5	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Pyridine	ND	5.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/21/2018 5:58:11 PM	40375
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/21/2018 5:58:11 PM	40375
Surr: 2-Fluorophenol	44.0	0	15-74.1		%Rec	1	9/21/2018 5:58:11 PM	40375
Surr: Phenol-d5	34.2	0	15-59.8		%Rec	1	9/21/2018 5:58:11 PM	40375
Surr: 2,4,6-Tribromophenol	64.0	0	22.1-112		%Rec	1	9/21/2018 5:58:11 PM	40375
Surr: Nitrobenzene-d5	70.6	0	33.2-94		%Rec	1	9/21/2018 5:58:11 PM	40375
Surr: 2-Fluorobiphenyl	63.1	0	34-90.9		%Rec	1	9/21/2018 5:58:11 PM	40375
Surr: 4-Terphenyl-d14	85.0	0	15-149		%Rec	1	9/21/2018 5:58:11 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.16	0.50		mg/L	5	9/12/2018 12:02:38 PM	R54117
Chloride	1300	18	50		mg/L	100	10/1/2018 8:27:36 PM	A54568
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/12/2018 12:02:38 PM	R54117
Bromide	0.97	0.13	0.50		mg/L	5	9/12/2018 12:02:38 PM	R54117
Nitrogen, Nitrate (As N)	0.077	0.033	0.50	J	mg/L	5	9/12/2018 12:02:38 PM	R54117
Phosphorus, Orthophosphate (As P)	1.2	0.46	2.5	J	mg/L	5	9/12/2018 12:02:38 PM	R54117
Sulfate	210	1.0	2.5		mg/L	5	9/12/2018 12:02:38 PM	R54117

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.093	0.00099	0.0020		mg/L	1	10/2/2018 8:39:35 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:39:35 PM	A54598
Calcium	54	0.078	1.0		mg/L	1	10/2/2018 8:39:35 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:39:35 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:39:35 PM	A54598
Iron	0.46	0.016	0.020	*	mg/L	1	10/2/2018 8:39:35 PM	A54598
Magnesium	6.8	0.25	1.0		mg/L	1	10/2/2018 8:39:35 PM	A54598
Manganese	0.033	0.00039	0.0020		mg/L	1	10/2/2018 8:39:35 PM	A54598
Potassium	3.2	0.11	1.0		mg/L	1	10/2/2018 8:39:35 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:39:35 PM	A54598
Sodium	990	3.3	20		mg/L	20	10/3/2018 7:18:41 PM	A54626
Zinc	0.0055	0.0021	0.010	J	mg/L	1	10/2/2018 8:39:35 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00075	0.00042	0.0010	J	mg/L	1	9/25/2018 1:24:37 PM	B54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 1:24:37 PM	B54404
Selenium	0.00080	0.00076	0.0010	J	mg/L	1	9/25/2018 1:24:37 PM	B54404
Uranium	0.038	0.00048	0.0025	*	mg/L	5	9/25/2018 3:07:12 PM	B54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	9/26/2018 4:02:09 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/10/2018
Lab ID: 1809583-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.10	0.0010	0.0020		mg/L	1	9/19/2018 3:18:33 PM	40362
Cadmium	ND	0.00058	0.0020		mg/L	1	9/19/2018 3:18:33 PM	40362
Chromium	ND	0.0018	0.0060		mg/L	1	9/19/2018 3:18:33 PM	40362
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:18:33 PM	40362
Iron	1.1	0.051	0.10	*	mg/L	5	9/17/2018 4:46:08 PM	40362
Manganese	0.040	0.0011	0.0020		mg/L	1	9/17/2018 4:44:08 PM	40362
Silver	0.0013	0.0012	0.0050	J	mg/L	1	9/19/2018 3:18:33 PM	40362
Zinc	ND	0.0033	0.010		mg/L	1	9/19/2018 3:18:33 PM	40362
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/19/2018 12:59:46 PM	40362
Lead	ND	0.0011	0.0025		mg/L	5	9/19/2018 12:59:46 PM	40362
Selenium	ND	0.0049	0.0050		mg/L	5	9/19/2018 12:59:46 PM	40362
Uranium	0.041	0.00034	0.0025	*	mg/L	5	9/19/2018 12:59:46 PM	40362
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00021	0.000038	0.00020		mg/L	1	9/26/2018 4:04:22 PM	40577

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809583-005A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Benzene	ND	0.17	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Toluene	ND	0.17	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Naphthalene	ND	0.29	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1-Methylnaphthalene	0.38	0.34	4.0	J	µg/L	1	9/13/2018 2:22:03 PM	A54139
2-Methylnaphthalene	0.42	0.24	4.0	J	µg/L	1	9/13/2018 2:22:03 PM	A54139
Acetone	ND	0.79	10		µg/L	1	9/13/2018 2:22:03 PM	A54139
Bromobenzene	ND	0.32	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Bromoform	ND	0.32	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Bromomethane	ND	0.26	3.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
2-Butanone	ND	1.3	10		µg/L	1	9/13/2018 2:22:03 PM	A54139
Carbon disulfide	ND	0.39	10		µg/L	1	9/13/2018 2:22:03 PM	A54139
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Chloroethane	ND	0.16	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Chloroform	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Chloromethane	ND	0.29	3.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Dibromomethane	ND	0.32	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809583-005A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **DJF**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
2-Hexanone	ND	0.91	10		µg/L	1	9/13/2018 2:22:03 PM	A54139
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/13/2018 2:22:03 PM	A54139
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Styrene	ND	0.25	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/13/2018 2:22:03 PM	A54139
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/13/2018 2:22:03 PM	A54139
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	1	9/13/2018 2:22:03 PM	A54139
Surr: 4-Bromofluorobenzene	90.6	0	70-130		%Rec	1	9/13/2018 2:22:03 PM	A54139
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	1	9/13/2018 2:22:03 PM	A54139
Surr: Toluene-d8	98.2	0	70-130		%Rec	1	9/13/2018 2:22:03 PM	A54139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0067	0.0060	0.006000	0	112	50	150			
Iron	0.019	0.020	0.02000	0	93.5	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Potassium	0.51	1.0	0.5000	0	102	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Zinc	0.0064	0.010	0.005000	0	128	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	49	1.0	50.00	0	97.0	85	115			
Chromium	0.49	0.0060	0.5000	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-A**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **A54598**		RunNo: **54598**						
Prep Date:		Analysis Date: **10/2/2018**		SeqNo: **1810780**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.49	0.0060	0.5000	0	97.5	85	115			
Iron		0.49	0.020	0.5000	0	98.8	85	115			
Magnesium		49	1.0	50.00	0	98.4	85	115			
Manganese		0.48	0.0020	0.5000	0	96.8	85	115			
Potassium		49	1.0	50.00	0	97.4	85	115			
Silver		0.10	0.0050	0.1000	0	102	85	115			
Sodium		48	1.0	50.00	0	96.0	85	115			
Zinc		0.49	0.010	0.5000	0	97.4	85	115			

Sample ID	**MB-A**	SampType: **MBLK**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**PBW**	Batch ID: **A54626**		RunNo: **54626**						
Prep Date:		Analysis Date: **10/3/2018**		SeqNo: **1812094**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		ND	1.0								

Sample ID	**LLLCS-A**	SampType: **LCSLL**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**BatchQC**	Batch ID: **A54626**		RunNo: **54626**						
Prep Date:		Analysis Date: **10/3/2018**		SeqNo: **1812095**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		0.66	1.0	0.5000	0	132	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**		TestCode: **EPA Method 200.7: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID: **A54626**		RunNo: **54626**						
Prep Date:		Analysis Date: **10/3/2018**		SeqNo: **1812096**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		49	1.0	50.00	0	98.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40362**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40362**	RunNo:	**54193**
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792039** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LLLCS-40362**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40362**	RunNo:	**54193**
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792048** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Cadmium	0.0017	0.0020	0.002000	0	86.5	50	150			J
Chromium	0.0052	0.0060	0.006000	0	87.5	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Silver	0.0046	0.0050	0.005000	0	91.6	50	150			J
Zinc	0.0072	0.010	0.005000	0	145	50	150			J

Sample ID	**LCS-40362**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40362**	RunNo:	**54193**
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.1	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.4	85	115			
Chromium	0.46	0.0060	0.5000	0	92.8	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Silver	0.094	0.0050	0.1000	0	94.0	85	115			
Zinc	0.46	0.010	0.5000	0	92.5	85	115			

Sample ID	**MB-40362**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40362**	RunNo:	**54193**
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**	SeqNo:	**1792056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0083	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LLLCS-40362**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40362**		RunNo:	**54193**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/17/2018**		SeqNo:	**1792058**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.013	0.0060	0.006000	0	215	50	150			BS

Sample ID	**MB-40620**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40620**		RunNo:	**54598**				
Prep Date:	**9/26/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1810763**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID	**LLLCS-40620**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40620**		RunNo:	**54598**				
Prep Date:	**9/26/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1810767**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0053	0.0060	0.006000	0	88.0	50	150			J

Sample ID	**LCS-40620**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**40620**		RunNo:	**54598**				
Prep Date:	**9/26/2018**	Analysis Date:	**10/2/2018**		SeqNo:	**1810768**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.50	0.0060	0.5000	0	99.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801651** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801652** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00093	0.0010	0.001000	0	93.4	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.2	50	150			J
Selenium	0.00090	0.0010	0.001000	0	89.9	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	93.7	50	150			J

Sample ID **MSLCS-B**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.4	85	115			
Lead	0.012	0.00050	0.01250	0	93.8	85	115			
Selenium	0.023	0.0010	0.02500	0	92.0	85	115			
Uranium	0.012	0.00050	0.01250	0	93.8	85	115			

Sample ID **1809583-001ELLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB13**	Batch ID: **B54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.9	70	130			
Lead	0.012	0.00050	0.01250	0	92.2	70	130			
Selenium	0.023	0.0010	0.02500	0	93.3	70	130			
Uranium	0.012	0.00050	0.01250	0	92.5	70	130			

Sample ID **1809583-001ELLMS**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB13**	Batch ID: **B54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809583-001ELLMS**	SampType:	**MSD**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**FB13**	Batch ID:	**B54404**	RunNo:	**54404**
Prep Date:		Analysis Date:	**9/25/2018**	SeqNo:	**1801665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.6	70	130	0.415	20	
Lead	0.012	0.00050	0.01250	0	92.7	70	130	0.500	20	
Selenium	0.024	0.0010	0.02500	0	94.0	70	130	0.751	20	
Uranium	0.012	0.00050	0.01250	0	93.7	70	130	1.27	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40362**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40362**	RunNo:	**54234**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793521**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40362**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40362**	RunNo:	**54234**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793522**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	98.9	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.7	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.4	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.1	50	150			J

Sample ID	**MSLCS-40362**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40362**	RunNo:	**54234**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793523**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.7	85	115			
Uranium	0.012	0.00050	0.01250	0	93.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40577**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40577**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803868**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000047	0.00020								J

Sample ID	**LCS-40577**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40577**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803869**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**
11-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54117**	RunNo: **54117**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788707** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	0.31	0.50								J
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.18	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54117**	RunNo: **54117**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.7	90	110			
Chloride	4.8	0.50	5.000	0	97.0	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	98.8	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.5	90	110			
Sulfate	9.7	0.50	10.00	0	97.2	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A54568**	RunNo: **54568**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1809286** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54568**	RunNo: **54568**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1809287** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809583-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB13**	Batch ID: **40328**	RunNo: **54142**
Prep Date: **9/13/2018**	Analysis Date: **9/15/2018**	SeqNo: **1791943** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	82.8	143			
Surr: DNOP	0.38		0.5000		75.5	76.7	135			S

Sample ID **1809583-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB13**	Batch ID: **40328**	RunNo: **54142**
Prep Date: **9/13/2018**	Analysis Date: **9/15/2018**	SeqNo: **1791944** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.9	82.8	143	1.89	20	
Surr: DNOP	0.37		0.5000		74.2	76.7	135	0	0	S

Sample ID **LCS-40328**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40328**	RunNo: **54142**
Prep Date: **9/13/2018**	Analysis Date: **9/15/2018**	SeqNo: **1791952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	70	130			
Surr: DNOP	0.37		0.5000		73.4	76.7	135			S

Sample ID **MB-40328**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40328**	RunNo: **54142**
Prep Date: **9/13/2018**	Analysis Date: **9/15/2018**	SeqNo: **1791953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.83		1.000		83.0	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**
11-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790063** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.33	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**
11-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790063** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.8	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.1	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.9	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790064** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	97.6	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790064** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	98.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	89.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.9	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID **1809583-003a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-5B**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790068** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	60.5	137			
Toluene	19	1.0	20.00	0.2418	93.6	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.4	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.5	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID **1809583-003a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-5B**	Batch ID: **A54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790069** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.4	60.5	137	0.920	20	
Toluene	19	1.0	20.00	0.2418	93.7	70	130	0.0948	20	
Chlorobenzene	21	1.0	20.00	0	103	70	130	1.08	20	
1,1-Dichloroethene	20	1.0	20.00	0	99.0	70	130	5.82	20	
Trichloroethene (TCE)	18	1.0	20.00	0	89.2	70	130	2.33	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		96.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809583-002cms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C**	Batch ID: **40375**	RunNo: **54318**
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798871** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.9	15	123			
4-Chloro-3-methylphenol	170	10	200.0	0	84.6	26.6	118			
2-Chlorophenol	150	10	200.0	0	76.7	15	120			
1,4-Dichlorobenzene	72	10	100.0	0	72.4	19	108			
2,4-Dinitrotoluene	69	10	100.0	0	69.3	27.8	103			
N-Nitrosodi-n-propylamine	90	10	100.0	0	89.9	32.3	126			
4-Nitrophenol	70	10	200.0	0	34.9	15	72.1			
Pentachlorophenol	140	20	200.0	0	69.8	15	114			
Phenol	83	10	200.0	0	41.7	15	67.5			
Pyrene	91	10	100.0	0	91.4	31.2	112			
1,2,4-Trichlorobenzene	83	10	100.0	0	82.8	22.1	123			
Surr: 2-Fluorophenol	110		200.0		52.7	15	74.1			
Surr: Phenol-d5	87		200.0		43.3	15	59.8			
Surr: 2,4,6-Tribromophenol	160		200.0		80.3	22.1	112			
Surr: Nitrobenzene-d5	80		100.0		79.6	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		76.4	34	90.9			
Surr: 4-Terphenyl-d14	91		100.0		90.7	15	149			

Sample ID **1809583-002cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C**	Batch ID: **40375**	RunNo: **54318**
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798872** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	69	10	100.0	0	69.3	15	123	10.3	30.5	
4-Chloro-3-methylphenol	150	10	200.0	0	75.8	26.6	118	11.0	50	
2-Chlorophenol	140	10	200.0	0	70.1	15	120	8.93	36.3	
1,4-Dichlorobenzene	63	10	100.0	0	63.1	19	108	13.8	42.1	
2,4-Dinitrotoluene	61	10	100.0	0	61.2	27.8	103	12.3	28.5	
N-Nitrosodi-n-propylamine	75	10	100.0	0	75.1	32.3	126	17.9	25.4	
4-Nitrophenol	73	10	200.0	0	36.5	15	72.1	4.48	50	
Pentachlorophenol	130	20	200.0	0	64.0	15	114	8.60	50	
Phenol	77	10	200.0	0	38.3	15	67.5	8.55	46.1	
Pyrene	82	10	100.0	0	82.4	31.2	112	10.3	34.3	
1,2,4-Trichlorobenzene	75	10	100.0	0	74.5	22.1	123	10.5	43.6	
Surr: 2-Fluorophenol	100		200.0		50.7	15	74.1	0	0	
Surr: Phenol-d5	81		200.0		40.5	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		67.5	22.1	112	0	0	
Surr: Nitrobenzene-d5	73		100.0		72.9	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.9	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809583-002cmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BW-5C**	Batch ID: **40375**	RunNo: **54318**
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798872** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	84		100.0		83.7	15	149	0	0	

Sample ID **mb-40375**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40375**	RunNo: **54318**
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798879** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40375**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40375**	RunNo: **54318**	
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798879**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **mb-40375**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40375**	RunNo: **54318**
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798879** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	150		200.0		75.3	15	74.1			S
Surr: Phenol-d5	140		200.0		70.6	15	59.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		74.2	22.1	112			
Surr: Nitrobenzene-d5	81		100.0		81.2	33.2	94			
Surr: 2-Fluorobiphenyl	79		100.0		78.6	34	90.9			
Surr: 4-Terphenyl-d14	82		100.0		82.1	15	149			

Sample ID **lcs-40375**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40375**	RunNo: **54377**
Prep Date: **9/17/2018**	Analysis Date: **9/24/2018**	SeqNo: **1800241** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	71.5	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	82.0	57	115			
2-Chlorophenol	150	10	200.0	0	77.2	43.4	112			
1,4-Dichlorobenzene	70	10	100.0	0	70.0	38	95.2			
2,4-Dinitrotoluene	65	10	100.0	0	65.5	55.1	96.7			
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.3	55	112			
4-Nitrophenol	120	10	200.0	0	57.9	16.6	93			
Pentachlorophenol	99	20	200.0	0	49.3	43.2	104			
Phenol	120	10	200.0	0	59.6	21.3	85.7			
Pyrene	76	10	100.0	0	75.6	64.9	105			
1,2,4-Trichlorobenzene	81	10	100.0	0	81.3	42.6	107			
Surr: 2-Fluorophenol	110		200.0		53.3	15	74.1			
Surr: Phenol-d5	100		200.0		52.4	15	59.8			
Surr: 2,4,6-Tribromophenol	120		200.0		57.6	22.1	112			
Surr: Nitrobenzene-d5	65		100.0		65.0	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		61.6	34	90.9			
Surr: 4-Terphenyl-d14	69		100.0		68.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809583**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **C54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790259** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.0		10.00		89.6	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **C54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790260** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	99.6	70	130			
Surr: BFB	9.9		10.00		98.6	70	130			

Sample ID **1809583-002a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-5C**	Batch ID: **C54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0.02420	90.2	63.4	130			
Surr: BFB	9.3		10.00		93.3	70	130			

Sample ID **1809583-002a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-5C**	Batch ID: **C54139**	RunNo: **54139**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1790265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0.02420	86.7	63.4	130	3.73	20	
Surr: BFB	9.1		10.00		91.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ANDEAVOR** Work Order Number: **1809583** RcptNo: **1**

Received By: **Jazzmine Burkhead** **9/12/2018 8:40:00 AM**

Completed By: **Ashley Gallegos** **9/12/2018 9:35:13 AM**

Reviewed By: ENM 9/12/18

Labeled by: IO 09/12/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 12
(<2 or >12 unless noted)
Adjusted? NO
Checked by: IO 09/12/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			
2	3.5	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809583	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/10/18	1320	H_2O	FB13	40ml VOA-5	HCl	-001			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/11/18	0700			09/12/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler #1 - 1.9+0.2(CF)=2

Courier Cooler #2 - 3.3+0.2(CF)=3

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809583	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/10/18	1435	H_2O	BW-5C	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -2	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date	Time	Relinquished by	Received by	Date	Time
9/11/18	0700		Ingrid Burkhead	09/12/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler #1 - 1.9+0.2(F)R.1

Courier Cooler #2 - 3.3+0.2(F) = 3.5

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809583	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/10/18	1520	H_2O	BW-5B	40ml VOA-5	HCl	-003			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/11/18	0700		Tracy Burkhard	09/12/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE** Cooler #1 - 1.9+0.2(F)=2.1

Courier Cooler #2 - 3.3+0.2(F)=3.5

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809583	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/10/18	—	H_2O	DUP 14	40ml VOA-5	HCl	-004			X							X						
				1 Liter Amber -1	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
9/10/18	—	H_2O	TRIP BLANK	40mL VOA-3	HCl	-005										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/11/18	0700		Jaggi Burkhead	09/12/18	08:40
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Cooler #1 = 1.9 +0.2 (RF) = 2.1

Cooler #2 = 3.3 +0.2 (RF) = 3.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 11, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Groundwater Sampling OrderNo.: 1809712

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/13/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 8:03:26 PM	G54175
Surr: BFB	90.8	0	69.3-150		%Rec	1	9/14/2018 8:03:26 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Toluene	ND	0.17	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Methyl tert-butyl ether (MTBE)	1.9	0.32	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Naphthalene	ND	0.29	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Acetone	8.6	0.79	10	J	µg/L	1	9/17/2018 1:30:00 PM	R54185
Bromobenzene	ND	0.32	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Bromoform	ND	0.32	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Bromomethane	ND	0.26	3.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
2-Butanone	ND	1.3	10		µg/L	1	9/17/2018 1:30:00 PM	R54185
Carbon disulfide	ND	0.39	10		µg/L	1	9/17/2018 1:30:00 PM	R54185
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Chloroethane	ND	0.16	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Chloroform	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Chloromethane	ND	0.29	3.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Dibromomethane	ND	0.32	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
2-Hexanone	ND	0.91	10		µg/L	1	9/17/2018 1:30:00 PM	R54185
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/17/2018 1:30:00 PM	R54185
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Styrene	ND	0.25	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/17/2018 1:30:00 PM	R54185
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/17/2018 1:30:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	91.5	0	70-130		%Rec	1	9/17/2018 1:30:00 PM	R54185
Surr: 4-Bromofluorobenzene	96.7	0	70-130		%Rec	1	9/17/2018 1:30:00 PM	R54185
Surr: Dibromofluoromethane	97.7	0	70-130		%Rec	1	9/17/2018 1:30:00 PM	R54185
Surr: Toluene-d8	92.3	0	70-130		%Rec	1	9/17/2018 1:30:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 4:11:26 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 4:11:26 PM	40368
Surr: DNOP	103	0	76.7-135		%Rec	1	9/17/2018 4:11:26 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	9/20/2018 2:59:25 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.19	0.16	0.50	J	mg/L	5	9/18/2018 8:36:34 PM	R54228
Chloride	110	3.6	10		mg/L	20	9/18/2018 8:48:59 PM	R54228
Bromide	ND	0.13	0.50		mg/L	5	9/18/2018 8:36:34 PM	R54228
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/18/2018 8:36:34 PM	R54228
Sulfate	160	1.0	2.5		mg/L	5	9/18/2018 8:36:34 PM	R54228
Nitrate+Nitrite as N	0.28	0.27	1.0	J	mg/L	5	9/18/2018 10:40:40 PM	R54228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.038	0.00099	0.0020		mg/L	1	10/1/2018 12:32:23 PM	B54547
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:32:23 PM	B54547
Calcium	2.3	0.078	1.0		mg/L	1	10/1/2018 12:32:23 PM	B54547
Chromium	ND	0.0013	0.0060		mg/L	1	10/1/2018 12:32:23 PM	B54547
Copper	ND	0.0032	0.0060		mg/L	1	10/1/2018 12:32:23 PM	B54547
Iron	0.017	0.016	0.020	J	mg/L	1	10/1/2018 12:32:23 PM	B54547
Magnesium	0.26	0.25	1.0	J	mg/L	1	10/1/2018 12:32:23 PM	B54547
Manganese	0.0068	0.00039	0.0020		mg/L	1	10/1/2018 12:32:23 PM	B54547
Potassium	0.76	0.11	1.0	J	mg/L	1	10/1/2018 12:32:23 PM	B54547
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 12:32:23 PM	B54547
Sodium	370	0.82	5.0		mg/L	5	10/1/2018 12:34:24 PM	B54547
Zinc	0.0072	0.0021	0.010	J	mg/L	1	10/1/2018 12:32:23 PM	B54547
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00070	0.00042	0.0010	J	mg/L	1	9/21/2018 1:50:12 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:50:12 PM	B54342
Selenium	0.0023	0.00076	0.0010		mg/L	1	9/21/2018 1:50:12 PM	B54342
Uranium	0.033	0.00048	0.0025	*	mg/L	5	9/21/2018 1:52:34 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000081	0.000038	0.00020	J	mg/L	1	9/26/2018 2:34:06 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-1
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:15:00 AM
Lab ID: 1809712-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.072	0.0010	0.0020		mg/L	1	9/18/2018 6:20:00 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:20:00 PM	40396
Chromium	0.024	0.0018	0.0060		mg/L	1	9/18/2018 6:20:00 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:42:49 PM	40396
Iron	2.0	0.051	0.10	*	mg/L	5	9/19/2018 3:48:26 PM	40396
Manganese	0.11	0.0011	0.0020	*	mg/L	1	9/18/2018 6:20:00 PM	40396
Silver	ND	0.0012	0.0050		mg/L	1	9/18/2018 6:20:00 PM	40396
Zinc	0.022	0.0033	0.010		mg/L	1	9/18/2018 6:20:00 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.0021	0.0050		mg/L	5	9/18/2018 2:02:41 PM	40396
Lead	0.0033	0.0011	0.0025		mg/L	5	9/18/2018 2:02:41 PM	40396
Selenium	ND	0.0049	0.0050		mg/L	5	9/18/2018 2:02:41 PM	40396
Uranium	0.035	0.00034	0.0025	*	mg/L	5	9/18/2018 2:02:41 PM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000081	0.000038	0.00020	J	mg/L	1	9/26/2018 2:40:46 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 8:26:42 PM	G54175
Surr: BFB	92.2	0	69.3-150		%Rec	1	9/14/2018 8:26:42 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Toluene	ND	0.17	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Naphthalene	ND	0.29	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Acetone	4.5	0.79	10	J	µg/L	1	9/17/2018 1:55:00 PM	R54185
Bromobenzene	ND	0.32	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Bromoform	ND	0.32	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Bromomethane	ND	0.26	3.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
2-Butanone	ND	1.3	10		µg/L	1	9/17/2018 1:55:00 PM	R54185
Carbon disulfide	ND	0.39	10		µg/L	1	9/17/2018 1:55:00 PM	R54185
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Chloroethane	ND	0.16	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Chloroform	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Chloromethane	ND	0.29	3.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Dibromomethane	ND	0.32	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
2-Hexanone	ND	0.91	10		µg/L	1	9/17/2018 1:55:00 PM	R54185
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/17/2018 1:55:00 PM	R54185
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Styrene	ND	0.25	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/17/2018 1:55:00 PM	R54185
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/17/2018 1:55:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	94.1	0	70-130		%Rec	1	9/17/2018 1:55:00 PM	R54185
Surr: 4-Bromofluorobenzene	96.2	0	70-130		%Rec	1	9/17/2018 1:55:00 PM	R54185
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/17/2018 1:55:00 PM	R54185
Surr: Toluene-d8	89.7	0	70-130		%Rec	1	9/17/2018 1:55:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 5:26:05 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 5:26:05 PM	40368
Surr: DNOP	105	0	76.7-135		%Rec	1	9/17/2018 5:26:05 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 4:00:26 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.031	0.10		mg/L	1	9/18/2018 9:26:14 PM	R54228
Chloride	ND	0.18	0.50		mg/L	1	9/18/2018 9:26:14 PM	R54228
Bromide	ND	0.027	0.10		mg/L	1	9/18/2018 9:26:14 PM	R54228
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50	H	mg/L	1	9/18/2018 9:26:14 PM	R54228
Sulfate	ND	0.21	0.50		mg/L	1	9/18/2018 9:26:14 PM	R54228
Nitrate+Nitrite as N	ND	0.27	1.0		mg/L	5	9/18/2018 10:53:05 PM	R54228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/1/2018 12:36:25 PM	B54547
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:36:25 PM	B54547
Calcium	ND	0.078	1.0		mg/L	1	10/1/2018 12:36:25 PM	B54547
Chromium	ND	0.0013	0.0060		mg/L	1	10/1/2018 12:36:25 PM	B54547
Copper	ND	0.0032	0.0060		mg/L	1	10/1/2018 12:36:25 PM	B54547
Iron	ND	0.016	0.020		mg/L	1	10/1/2018 12:36:25 PM	B54547
Magnesium	ND	0.25	1.0		mg/L	1	10/1/2018 12:36:25 PM	B54547
Manganese	ND	0.00039	0.0020		mg/L	1	10/1/2018 12:36:25 PM	B54547
Potassium	ND	0.11	1.0		mg/L	1	10/1/2018 12:36:25 PM	B54547
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 12:36:25 PM	B54547
Sodium	0.39	0.16	1.0	J	mg/L	1	10/1/2018 12:36:25 PM	B54547
Zinc	0.0065	0.0021	0.010	J	mg/L	1	10/1/2018 12:36:25 PM	B54547
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	ND	0.00042	0.0010		mg/L	1	9/21/2018 1:54:57 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 1:54:57 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 1:54:57 PM	B54342
Uranium	ND	0.000096	0.00050		mg/L	1	9/21/2018 1:54:57 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00015	0.000038	0.00020	J	mg/L	1	9/26/2018 2:43:00 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 8:45:00 AM
Lab ID: 1809712-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	9/18/2018 6:31:01 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:31:01 PM	40396
Chromium	ND	0.0018	0.0060		mg/L	1	9/18/2018 6:31:01 PM	40396
Copper	0.0047	0.0041	0.0060	J	mg/L	1	9/18/2018 6:31:01 PM	40396
Iron	ND	0.010	0.020		mg/L	1	9/18/2018 6:31:01 PM	40396
Manganese	ND	0.0011	0.0020		mg/L	1	9/18/2018 6:31:01 PM	40396
Silver	ND	0.0012	0.0050		mg/L	1	9/18/2018 6:31:01 PM	40396
Zinc	ND	0.0033	0.010		mg/L	1	9/18/2018 6:31:01 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	ND	0.00041	0.0010		mg/L	1	9/19/2018 11:36:54 AM	40396
Lead	ND	0.00023	0.00050		mg/L	1	9/19/2018 11:36:54 AM	40396
Selenium	ND	0.00098	0.0010		mg/L	1	9/19/2018 11:36:54 AM	40396
Uranium	ND	0.000068	0.00050		mg/L	1	9/19/2018 11:36:54 AM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00014	0.000038	0.00020	J	mg/L	1	9/26/2018 2:45:16 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 8:50:09 PM	G54175
Surr: BFB	94.8	0	69.3-150		%Rec	1	9/14/2018 8:50:09 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Toluene	ND	0.17	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Methyl tert-butyl ether (MTBE)	19	0.32	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2-Dichloroethane (EDC)	0.45	0.40	1.0	J	µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Naphthalene	ND	0.29	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Acetone	6.8	0.79	10	J	µg/L	1	9/17/2018 2:19:00 PM	R54185
Bromobenzene	ND	0.32	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Bromoform	ND	0.32	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Bromomethane	ND	0.26	3.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
2-Butanone	ND	1.3	10		µg/L	1	9/17/2018 2:19:00 PM	R54185
Carbon disulfide	ND	0.39	10		µg/L	1	9/17/2018 2:19:00 PM	R54185
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Chloroethane	ND	0.16	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Chloroform	ND	0.40	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Chloromethane	ND	0.29	3.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Dibromomethane	ND	0.32	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1-Dichloroethane	1.3	0.40	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1-Dichloroethene	0.86	0.12	1.0	J	µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
2-Hexanone	ND	0.91	10		µg/L	1	9/17/2018 2:19:00 PM	R54185
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/17/2018 2:19:00 PM	R54185
Methylene Chloride	0.27	0.21	3.0	J	µg/L	1	9/17/2018 2:19:00 PM	R54185
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Styrene	ND	0.25	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/17/2018 2:19:00 PM	R54185
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/17/2018 2:19:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	97.9	0	70-130		%Rec	1	9/17/2018 2:19:00 PM	R54185
Surr: 4-Bromofluorobenzene	95.1	0	70-130		%Rec	1	9/17/2018 2:19:00 PM	R54185
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/17/2018 2:19:00 PM	R54185
Surr: Toluene-d8	92.5	0	70-130		%Rec	1	9/17/2018 2:19:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 5:48:18 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 5:48:18 PM	40368
Surr: DNOP	109	0	76.7-135		%Rec	1	9/17/2018 5:48:18 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 4:15:50 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.16	0.50		mg/L	5	9/13/2018 10:44:10 AM	R54173
Chloride	830	18	50		mg/L	100	9/24/2018 9:33:57 PM	R54385
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/13/2018 10:44:10 AM	R54173
Bromide	1.2	0.13	0.50		mg/L	5	9/13/2018 10:44:10 AM	R54173
Nitrogen, Nitrate (As N)	1.0	0.033	0.50		mg/L	5	9/13/2018 10:44:10 AM	R54173
Phosphorus, Orthophosphate (As P)	1.5	0.46	2.5	J	mg/L	5	9/13/2018 10:44:10 AM	R54173
Sulfate	250	4.1	10		mg/L	20	9/13/2018 10:57:02 AM	R54173

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.060	0.00099	0.0020		mg/L	1	10/3/2018 5:56:16 PM	A54626
Cadmium	ND	0.0010	0.0020		mg/L	1	10/3/2018 5:56:16 PM	A54626
Calcium	92	0.078	1.0		mg/L	1	10/3/2018 5:56:16 PM	A54626
Chromium	ND	0.0013	0.0060		mg/L	1	10/3/2018 5:56:16 PM	A54626
Copper	ND	0.0032	0.0060		mg/L	1	10/3/2018 5:56:16 PM	A54626
Iron	ND	0.016	0.020		mg/L	1	10/3/2018 5:56:16 PM	A54626
Magnesium	18	0.25	1.0		mg/L	1	10/3/2018 5:56:16 PM	A54626
Manganese	0.089	0.00039	0.0020	*	mg/L	1	10/3/2018 5:56:16 PM	A54626
Potassium	1.4	0.11	1.0		mg/L	1	10/3/2018 5:56:16 PM	A54626
Silver	0.0041	0.0018	0.0050	J	mg/L	1	10/3/2018 5:56:16 PM	A54626
Sodium	720	1.6	10		mg/L	10	10/3/2018 5:58:31 PM	A54626
Zinc	0.014	0.0021	0.010		mg/L	1	10/3/2018 5:56:16 PM	A54626
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	9/21/2018 1:57:19 PM	B54342
Lead	0.00018	0.00017	0.00050	J	mg/L	1	9/21/2018 1:57:19 PM	B54342
Selenium	0.011	0.00076	0.0010		mg/L	1	9/21/2018 1:57:19 PM	B54342
Uranium	0.050	0.00048	0.0025	*	mg/L	5	9/21/2018 1:59:43 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00018	0.000038	0.00020	J	mg/L	1	9/26/2018 2:47:31 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-10
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 10:45:00 AM
Lab ID: 1809712-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.055	0.0010	0.0020		mg/L	1	9/18/2018 6:43:49 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:43:49 PM	40396
Chromium	ND	0.0018	0.0060		mg/L	1	9/18/2018 6:43:49 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:56:19 PM	40396
Iron	0.013	0.010	0.020	J	mg/L	1	9/18/2018 6:43:49 PM	40396
Manganese	0.084	0.0011	0.0020	*	mg/L	1	9/18/2018 6:43:49 PM	40396
Silver	0.0036	0.0012	0.0050	J	mg/L	1	9/18/2018 6:43:49 PM	40396
Zinc	ND	0.0033	0.010		mg/L	1	9/18/2018 6:43:49 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0013	0.00041	0.0010		mg/L	1	9/18/2018 2:07:17 PM	40396
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:07:17 PM	40396
Selenium	0.010	0.00098	0.0010		mg/L	1	9/18/2018 2:07:17 PM	40396
Uranium	0.054	0.00034	0.0025	*	mg/L	5	9/19/2018 1:29:38 PM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000094	0.000038	0.00020	J	mg/L	1	9/26/2018 2:49:46 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.046	0.024	0.050	J	mg/L	1	9/14/2018 9:13:35 PM	G54175
Surr: BFB	92.1	0	69.3-150		%Rec	1	9/14/2018 9:13:35 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Toluene	ND	0.17	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Methyl tert-butyl ether (MTBE)	75	0.32	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2-Dichloroethane (EDC)	0.76	0.40	1.0	J	µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Naphthalene	ND	0.29	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Acetone	4.5	0.79	10	J	µg/L	1	9/17/2018 2:44:00 PM	R54185
Bromobenzene	ND	0.32	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Bromoform	ND	0.32	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Bromomethane	ND	0.26	3.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
2-Butanone	ND	1.3	10		µg/L	1	9/17/2018 2:44:00 PM	R54185
Carbon disulfide	ND	0.39	10		µg/L	1	9/17/2018 2:44:00 PM	R54185
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Chloroethane	ND	0.16	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Chloroform	ND	0.40	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Chloromethane	ND	0.29	3.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Dibromomethane	ND	0.32	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
2-Hexanone	ND	0.91	10		µg/L	1	9/17/2018 2:44:00 PM	R54185
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/17/2018 2:44:00 PM	R54185
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Styrene	ND	0.25	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/17/2018 2:44:00 PM	R54185
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/17/2018 2:44:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	95.4	0	70-130		%Rec	1	9/17/2018 2:44:00 PM	R54185
Surr: 4-Bromofluorobenzene	94.6	0	70-130		%Rec	1	9/17/2018 2:44:00 PM	R54185
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/17/2018 2:44:00 PM	R54185
Surr: Toluene-d8	93.2	0	70-130		%Rec	1	9/17/2018 2:44:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 6:10:21 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 6:10:21 PM	40368
Surr: DNOP	104	0	76.7-135		%Rec	1	9/17/2018 6:10:21 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 4:31:09 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.019	0.00099	0.0020		mg/L	1	10/3/2018 6:00:38 PM	A54626
Cadmium	ND	0.0010	0.0020		mg/L	1	10/3/2018 6:00:38 PM	A54626
Chromium	ND	0.0013	0.0060		mg/L	1	10/3/2018 6:00:38 PM	A54626
Copper	ND	0.0032	0.0060		mg/L	1	10/3/2018 6:00:38 PM	A54626
Iron	ND	0.016	0.020		mg/L	1	10/3/2018 6:00:38 PM	A54626
Manganese	0.020	0.00039	0.0020		mg/L	1	10/3/2018 6:00:38 PM	A54626
Silver	ND	0.0018	0.0050		mg/L	1	10/3/2018 6:00:38 PM	A54626
Zinc	0.0070	0.0021	0.010	J	mg/L	1	10/3/2018 6:00:38 PM	A54626
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00078	0.00042	0.0010	J	mg/L	1	9/21/2018 2:02:06 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 2:02:06 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 2:02:06 PM	B54342
Uranium	0.015	0.000096	0.00050		mg/L	1	9/21/2018 2:02:06 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000066	0.000038	0.00020	J	mg/L	1	9/26/2018 2:56:40 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-13
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 1:30:00 PM
Lab ID: 1809712-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.018	0.0010	0.0020		mg/L	1	9/18/2018 6:48:10 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:48:10 PM	40396
Chromium	ND	0.0018	0.0060		mg/L	1	9/18/2018 6:48:10 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 3:58:35 PM	40396
Iron	ND	0.010	0.020		mg/L	1	9/18/2018 6:48:10 PM	40396
Manganese	0.020	0.0011	0.0020		mg/L	1	9/18/2018 6:48:10 PM	40396
Silver	ND	0.0012	0.0050		mg/L	1	9/18/2018 6:48:10 PM	40396
Zinc	ND	0.0033	0.010		mg/L	1	9/18/2018 6:48:10 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.00078	0.00041	0.0010	J	mg/L	1	9/18/2018 2:14:11 PM	40396
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:14:11 PM	40396
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 2:14:11 PM	40396
Uranium	0.015	0.000068	0.00050		mg/L	1	9/18/2018 2:14:11 PM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000069	0.000038	0.00020	J	mg/L	1	9/26/2018 2:58:57 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	40	1.2	2.5		mg/L	50	9/14/2018 9:36:47 PM	G54175
Surr: BFB	93.9	0	69.3-150		%Rec	50	9/14/2018 9:36:47 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	17000	87	500		µg/L	500	9/17/2018 3:09:00 PM	R54185
Toluene	ND	8.4	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Ethylbenzene	660	11	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Methyl tert-butyl ether (MTBE)	740	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2,4-Trimethylbenzene	ND	13	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Naphthalene	27	14	100	J	µg/L	50	9/17/2018 3:33:00 PM	R54185
1-Methylnaphthalene	26	17	200	J	µg/L	50	9/17/2018 3:33:00 PM	R54185
2-Methylnaphthalene	ND	12	200		µg/L	50	9/17/2018 3:33:00 PM	R54185
Acetone	ND	39	500		µg/L	50	9/17/2018 3:33:00 PM	R54185
Bromobenzene	ND	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Bromodichloromethane	ND	14	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Bromoform	ND	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Bromomethane	ND	13	150		µg/L	50	9/17/2018 3:33:00 PM	R54185
2-Butanone	ND	63	500		µg/L	50	9/17/2018 3:33:00 PM	R54185
Carbon disulfide	ND	19	500		µg/L	50	9/17/2018 3:33:00 PM	R54185
Carbon Tetrachloride	ND	6.7	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Chlorobenzene	ND	15	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Chloroethane	ND	8.2	100		µg/L	50	9/17/2018 3:33:00 PM	R54185
Chloroform	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Chloromethane	ND	15	150		µg/L	50	9/17/2018 3:33:00 PM	R54185
2-Chlorotoluene	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
4-Chlorotoluene	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
cis-1,2-DCE	ND	19	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	9/17/2018 3:33:00 PM	R54185
Dibromochloromethane	ND	12	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Dibromomethane	ND	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2-Dichlorobenzene	ND	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,3-Dichlorobenzene	ND	16	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,4-Dichlorobenzene	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Dichlorodifluoromethane	ND	50	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1-Dichloroethane	ND	20	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1-Dichloroethene	ND	6.0	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2-Dichloropropane	ND	7.7	50		µg/L	50	9/17/2018 3:33:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	14	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
2,2-Dichloropropane	ND	9.2	100		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1-Dichloropropene	ND	8.1	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Hexachlorobutadiene	ND	40	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
2-Hexanone	ND	45	500		µg/L	50	9/17/2018 3:33:00 PM	R54185
Isopropylbenzene	17	11	50	J	µg/L	50	9/17/2018 3:33:00 PM	R54185
4-Isopropyltoluene	ND	12	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
4-Methyl-2-pentanone	ND	23	500		µg/L	50	9/17/2018 3:33:00 PM	R54185
Methylene Chloride	ND	10	150		µg/L	50	9/17/2018 3:33:00 PM	R54185
n-Butylbenzene	ND	12	150		µg/L	50	9/17/2018 3:33:00 PM	R54185
n-Propylbenzene	30	12	50	J	µg/L	50	9/17/2018 3:33:00 PM	R54185
sec-Butylbenzene	ND	10	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Styrene	ND	13	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
tert-Butylbenzene	ND	11	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	9/17/2018 3:33:00 PM	R54185
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
trans-1,2-DCE	ND	9.2	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1,1-Trichloroethane	ND	7.7	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,1,2-Trichloroethane	ND	12	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Trichloroethene (TCE)	ND	13	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Trichlorofluoromethane	ND	8.4	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
1,2,3-Trichloropropane	ND	28	100		µg/L	50	9/17/2018 3:33:00 PM	R54185
Vinyl chloride	ND	5.5	50		µg/L	50	9/17/2018 3:33:00 PM	R54185
Xylenes, Total	42	32	75	J	µg/L	50	9/17/2018 3:33:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	50	9/17/2018 3:33:00 PM	R54185
Surr: 4-Bromofluorobenzene	96.4	0	70-130		%Rec	50	9/17/2018 3:33:00 PM	R54185
Surr: Dibromofluoromethane	103	0	70-130		%Rec	50	9/17/2018 3:33:00 PM	R54185
Surr: Toluene-d8	93.6	0	70-130		%Rec	50	9/17/2018 3:33:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.9	0.63	1.0		mg/L	1	9/17/2018 6:32:29 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 6:32:29 PM	40368
Surr: DNOP	107	0	76.7-135		%Rec	1	9/17/2018 6:32:29 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 4:46:25 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	2.3	0.0049	0.010	*	mg/L	5	10/1/2018 12:58:20 PM	B54547
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 12:56:19 PM	B54547
Chromium	ND	0.0013	0.0060		mg/L	1	10/1/2018 12:56:19 PM	B54547
Copper	ND	0.0032	0.0060		mg/L	1	10/1/2018 12:56:19 PM	B54547
Iron	4.7	0.16	0.20	*	mg/L	10	10/2/2018 7:53:03 PM	A54598
Manganese	2.2	0.0020	0.010	*	mg/L	5	10/1/2018 12:58:20 PM	B54547
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 12:56:19 PM	B54547
Zinc	0.0099	0.0021	0.010	J	mg/L	1	10/1/2018 12:56:19 PM	B54547
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.0056	0.00042	0.0010		mg/L	1	9/21/2018 2:04:32 PM	B54342
Lead	ND	0.00017	0.00050		mg/L	1	9/21/2018 2:04:32 PM	B54342
Selenium	ND	0.00076	0.0010		mg/L	1	9/21/2018 2:04:32 PM	B54342
Uranium	0.0029	0.000096	0.00050		mg/L	1	9/21/2018 2:04:32 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000063	0.000038	0.00020	J	mg/L	1	9/26/2018 3:01:14 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-14
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 2:40:00 PM
Lab ID: 1809712-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	2.2	0.0050	0.010	*	mg/L	5	9/18/2018 6:54:29 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:52:29 PM	40396
Chromium	ND	0.0018	0.0060		mg/L	1	9/18/2018 6:52:29 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/18/2018 6:52:29 PM	40396
Iron	5.0	0.051	0.10	*	mg/L	5	9/18/2018 6:54:29 PM	40396
Manganese	2.1	0.0055	0.010	*	mg/L	5	9/18/2018 6:54:29 PM	40396
Silver	0.0025	0.0012	0.0050	J	mg/L	1	9/18/2018 6:52:29 PM	40396
Zinc	ND	0.0033	0.010		mg/L	1	9/18/2018 6:52:29 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0059	0.00041	0.0010		mg/L	1	9/18/2018 2:16:28 PM	40396
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:16:28 PM	40396
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 2:16:28 PM	40396
Uranium	0.0028	0.000068	0.00050		mg/L	1	9/18/2018 2:16:28 PM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000059	0.000038	0.00020	J	mg/L	1	9/26/2018 3:03:31 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	3.5	0.12	0.25		mg/L	5	9/14/2018 9:59:58 PM	G54175
Surr: BFB	90.1	0	69.3-150		%Rec	5	9/14/2018 9:59:58 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.96	0.87	5.0	J	µg/L	5	9/17/2018 4:23:00 PM	R54185
Toluene	ND	0.84	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Ethylbenzene	ND	1.1	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Methyl tert-butyl ether (MTBE)	3900	16	50		µg/L	50	9/17/2018 3:58:00 PM	R54185
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Naphthalene	ND	1.4	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
1-Methylnaphthalene	ND	1.7	20		µg/L	5	9/17/2018 4:23:00 PM	R54185
2-Methylnaphthalene	ND	1.2	20		µg/L	5	9/17/2018 4:23:00 PM	R54185
Acetone	11	3.9	50	J	µg/L	5	9/17/2018 4:23:00 PM	R54185
Bromobenzene	ND	1.6	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Bromodichloromethane	ND	1.4	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Bromoform	ND	1.6	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Bromomethane	ND	1.3	15		µg/L	5	9/17/2018 4:23:00 PM	R54185
2-Butanone	ND	6.3	50		µg/L	5	9/17/2018 4:23:00 PM	R54185
Carbon disulfide	ND	1.9	50		µg/L	5	9/17/2018 4:23:00 PM	R54185
Carbon Tetrachloride	ND	0.67	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Chlorobenzene	ND	1.5	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Chloroethane	ND	0.82	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
Chloroform	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Chloromethane	ND	1.5	15		µg/L	5	9/17/2018 4:23:00 PM	R54185
2-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
4-Chlorotoluene	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
Dibromochloromethane	ND	1.2	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Dibromomethane	ND	1.6	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,4-Dichlorobenzene	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Dichlorodifluoromethane	ND	5.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1-Dichloroethane	ND	2.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2-Dichloropropane	ND	0.77	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
2,2-Dichloropropane	ND	0.92	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Hexachlorobutadiene	ND	4.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
2-Hexanone	ND	4.5	50		µg/L	5	9/17/2018 4:23:00 PM	R54185
Isopropylbenzene	ND	1.1	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	9/17/2018 4:23:00 PM	R54185
Methylene Chloride	ND	1.0	15		µg/L	5	9/17/2018 4:23:00 PM	R54185
n-Butylbenzene	ND	1.2	15		µg/L	5	9/17/2018 4:23:00 PM	R54185
n-Propylbenzene	ND	1.2	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Styrene	ND	1.3	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
trans-1,2-DCE	ND	0.92	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1,1-Trichloroethane	ND	0.77	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Trichlorofluoromethane	ND	0.84	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	9/17/2018 4:23:00 PM	R54185
Vinyl chloride	ND	0.55	5.0		µg/L	5	9/17/2018 4:23:00 PM	R54185
Xylenes, Total	ND	3.2	7.5		µg/L	5	9/17/2018 4:23:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	95.3	0	70-130		%Rec	5	9/17/2018 4:23:00 PM	R54185
Surr: 4-Bromofluorobenzene	93.0	0	70-130		%Rec	5	9/17/2018 4:23:00 PM	R54185
Surr: Dibromofluoromethane	103	0	70-130		%Rec	5	9/17/2018 4:23:00 PM	R54185
Surr: Toluene-d8	94.0	0	70-130		%Rec	5	9/17/2018 4:23:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 6:54:38 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 6:54:38 PM	40368
Surr: DNOP	106	0	76.7-135		%Rec	1	9/17/2018 6:54:38 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 5:01:39 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.073	0.00099	0.0020		mg/L	1	10/1/2018 1:00:17 PM	B54547
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 1:00:17 PM	B54547
Chromium	ND	0.0013	0.0060		mg/L	1	10/1/2018 1:00:17 PM	B54547
Copper	ND	0.0032	0.0060		mg/L	1	10/1/2018 1:00:17 PM	B54547
Iron	0.26	0.016	0.020		mg/L	1	10/1/2018 1:00:17 PM	B54547
Manganese	0.33	0.00039	0.0020	*	mg/L	1	10/1/2018 1:00:17 PM	B54547
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 1:00:17 PM	B54547
Zinc	0.0062	0.0021	0.010	J	mg/L	1	10/1/2018 1:00:17 PM	B54547
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00086	0.00042	0.0010	J	mg/L	1	9/20/2018 2:30:30 PM	B54299
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2018 2:30:30 PM	B54299
Selenium	ND	0.00076	0.0010		mg/L	1	9/20/2018 2:30:30 PM	B54299
Uranium	0.048	0.00048	0.0025	*	mg/L	5	9/21/2018 2:11:43 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000054	0.000038	0.00020	J	mg/L	1	9/26/2018 3:05:49 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: OW-29
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018 4:20:00 PM
Lab ID: 1809712-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.071	0.0010	0.0020		mg/L	1	9/18/2018 6:56:28 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 6:56:28 PM	40396
Chromium	ND	0.0018	0.0060		mg/L	1	9/18/2018 6:56:28 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/18/2018 6:56:28 PM	40396
Iron	0.47	0.010	0.020	*	mg/L	1	9/18/2018 6:56:28 PM	40396
Manganese	0.31	0.0011	0.0020	*	mg/L	1	9/18/2018 6:56:28 PM	40396
Silver	0.0022	0.0012	0.0050	J	mg/L	1	9/18/2018 6:56:28 PM	40396
Zinc	ND	0.0033	0.010		mg/L	1	9/18/2018 6:56:28 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.0010	0.00041	0.0010		mg/L	1	9/18/2018 2:18:46 PM	40396
Lead	ND	0.00023	0.00050		mg/L	1	9/18/2018 2:18:46 PM	40396
Selenium	ND	0.00098	0.0010		mg/L	1	9/18/2018 2:18:46 PM	40396
Uranium	0.051	0.00034	0.0025	*	mg/L	5	9/19/2018 11:46:05 AM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000046	0.000038	0.00020	J	mg/L	1	9/26/2018 3:08:08 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/17/2018 10:21:48 AM	GW542
Surr: BFB	92.3	0	69.3-150		%Rec	1	9/17/2018 10:21:48 AM	GW542
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Toluene	0.17	0.17	1.0	J	µg/L	1	9/18/2018 11:29:00 AM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Methyl tert-butyl ether (MTBE)	1.7	0.32	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Acetone	2.5	0.79	10	J	µg/L	1	9/18/2018 11:29:00 AM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 11:29:00 AM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 11:29:00 AM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 11:29:00 AM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 11:29:00 AM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 11:29:00 AM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 11:29:00 AM	R54215
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%Rec	1	9/18/2018 11:29:00 AM	R54215
Surr: 4-Bromofluorobenzene	94.3	0	70-130		%Rec	1	9/18/2018 11:29:00 AM	R54215
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	9/18/2018 11:29:00 AM	R54215
Surr: Toluene-d8	90.7	0	70-130		%Rec	1	9/18/2018 11:29:00 AM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 7:16:47 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 7:16:47 PM	40368
Surr: DNOP	109	0	76.7-135		%Rec	1	9/17/2018 7:16:47 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **CLP**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	9/20/2018 5:16:58 PM	40465

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.19	0.16	0.50	J	mg/L	5	9/18/2018 10:15:51 PM	R54228
Chloride	110	3.6	10		mg/L	20	9/18/2018 10:28:16 PM	R54228
Bromide	ND	0.13	0.50		mg/L	5	9/18/2018 10:15:51 PM	R54228
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/18/2018 10:15:51 PM	R54228
Sulfate	160	1.0	2.5		mg/L	5	9/18/2018 10:15:51 PM	R54228
Nitrate+Nitrite as N	0.48	0.27	1.0	J	mg/L	5	9/18/2018 11:05:30 PM	R54228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.037	0.00099	0.0020		mg/L	1	10/1/2018 1:04:27 PM	B54547
Cadmium	ND	0.0010	0.0020		mg/L	1	10/1/2018 1:04:27 PM	B54547
Calcium	2.3	0.078	1.0		mg/L	1	10/1/2018 1:04:27 PM	B54547
Chromium	ND	0.0013	0.0060		mg/L	1	10/1/2018 1:04:27 PM	B54547
Copper	ND	0.0032	0.0060		mg/L	1	10/1/2018 1:04:27 PM	B54547
Iron	ND	0.016	0.020		mg/L	1	10/1/2018 1:04:27 PM	B54547
Magnesium	0.26	0.25	1.0	J	mg/L	1	10/1/2018 1:04:27 PM	B54547
Manganese	0.0067	0.00039	0.0020		mg/L	1	10/1/2018 1:04:27 PM	B54547
Potassium	0.69	0.11	1.0	J	mg/L	1	10/1/2018 1:04:27 PM	B54547
Silver	ND	0.0018	0.0050		mg/L	1	10/1/2018 1:04:27 PM	B54547
Sodium	370	0.82	5.0		mg/L	5	10/1/2018 1:06:27 PM	B54547
Zinc	0.011	0.0021	0.010		mg/L	1	10/1/2018 1:04:27 PM	B54547
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Arsenic	0.00071	0.00042	0.0010	J	mg/L	1	9/20/2018 2:32:54 PM	B54299
Lead	ND	0.00017	0.00050		mg/L	1	9/20/2018 2:32:54 PM	B54299
Selenium	0.0024	0.00076	0.0010		mg/L	1	9/20/2018 2:32:54 PM	B54299
Uranium	0.034	0.00048	0.0025	*	mg/L	5	9/21/2018 2:14:06 PM	B54342
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000074	0.000038	0.00020	J	mg/L	1	9/26/2018 3:10:19 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP15
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date: 9/11/2018
Lab ID: 1809712-007F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.053	0.0010	0.0020		mg/L	1	9/18/2018 7:00:39 PM	40396
Cadmium	ND	0.00058	0.0020		mg/L	1	9/18/2018 7:00:39 PM	40396
Chromium	0.012	0.0018	0.0060		mg/L	1	9/18/2018 7:00:39 PM	40396
Copper	ND	0.0041	0.0060		mg/L	1	9/19/2018 4:00:42 PM	40396
Iron	1.3	0.051	0.10	*	mg/L	5	9/18/2018 7:10:51 PM	40396
Manganese	0.056	0.0011	0.0020	*	mg/L	1	9/18/2018 7:00:39 PM	40396
Silver	ND	0.0012	0.0050		mg/L	1	9/18/2018 7:00:39 PM	40396
Zinc	0.012	0.0033	0.010		mg/L	1	9/18/2018 7:00:39 PM	40396
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Arsenic	0.00094	0.00041	0.0010	J	mg/L	1	9/18/2018 2:21:03 PM	40396
Lead	0.0015	0.00023	0.00050		mg/L	1	9/18/2018 2:21:03 PM	40396
Selenium	0.0023	0.00098	0.0010		mg/L	1	9/18/2018 2:21:03 PM	40396
Uranium	0.034	0.00034	0.0025	*	mg/L	5	9/19/2018 11:48:22 AM	40396
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000068	0.000038	0.00020	J	mg/L	1	9/26/2018 3:12:31 PM	40576

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809712-008A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Toluene	ND	0.17	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Naphthalene	ND	0.29	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Acetone	2.8	0.79	10	J	µg/L	1	9/17/2018 6:02:00 PM	R54185
Bromobenzene	ND	0.32	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Bromoform	ND	0.32	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Bromomethane	ND	0.26	3.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
2-Butanone	ND	1.3	10		µg/L	1	9/17/2018 6:02:00 PM	R54185
Carbon disulfide	ND	0.39	10		µg/L	1	9/17/2018 6:02:00 PM	R54185
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Chloroethane	ND	0.16	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Chloroform	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Chloromethane	ND	0.29	3.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Dibromomethane	ND	0.32	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: 3rd Quarter 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809712-008A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
2-Hexanone	ND	0.91	10		µg/L	1	9/17/2018 6:02:00 PM	R54185
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/17/2018 6:02:00 PM	R54185
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Styrene	ND	0.25	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/17/2018 6:02:00 PM	R54185
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/17/2018 6:02:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	96.9	0	70-130		%Rec	1	9/17/2018 6:02:00 PM	R54185
Surr: 4-Bromofluorobenzene	94.8	0	70-130		%Rec	1	9/17/2018 6:02:00 PM	R54185
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	9/17/2018 6:02:00 PM	R54185
Surr: Toluene-d8	91.7	0	70-130		%Rec	1	9/17/2018 6:02:00 PM	R54185

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54547**	RunNo: **54547**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1808510** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54547**	RunNo: **54547**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1808511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	107	50	150			
Cadmium	0.0020	0.0020	0.002000	0	99.5	50	150			J
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0053	0.0060	0.006000	0	88.7	50	150			J
Copper	0.0055	0.0060	0.006000	0	91.5	50	150			J
Iron	0.023	0.020	0.02000	0	116	50	150			
Magnesium	0.52	1.0	0.5000	0	104	50	150			J
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Potassium	0.43	1.0	0.5000	0	85.1	50	150			J
Silver	0.0049	0.0050	0.005000	0	98.4	50	150			J
Sodium	0.46	1.0	0.5000	0	91.3	50	150			J
Zinc	0.0050	0.010	0.005000	0	99.4	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54547**	RunNo: **54547**
Prep Date:	Analysis Date: **10/1/2018**	SeqNo: **1808512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Calcium	48	1.0	50.00	0	96.5	85	115			
Chromium	0.47	0.0060	0.5000	0	94.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-B**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B54547**			RunNo: **54547**					
Prep Date:		Analysis Date: **10/1/2018**			SeqNo: **1808512**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Potassium	49	1.0	50.00	0	98.2	85	115			
Silver	0.098	0.0050	0.1000	0	97.9	85	115			
Sodium	52	1.0	50.00	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	93.8	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810775**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LLLCS-A**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810776**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.019	0.020	0.02000	0	93.5	50	150			J

Sample ID	**LCS-A**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **A54598**			RunNo: **54598**					
Prep Date:		Analysis Date: **10/2/2018**			SeqNo: **1810780**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	98.8	85	115			

Sample ID	**MB-A**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **A54626**			RunNo: **54626**					
Prep Date:		Analysis Date: **10/3/2018**			SeqNo: **1812094**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Calcium	0.50	1.0	0.5000	0	101	50	150			J
Chromium	0.0056	0.0060	0.006000	0	93.5	50	150			J
Copper	0.0048	0.0060	0.006000	0	79.7	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	101	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Potassium	0.44	1.0	0.5000	0	87.9	50	150			J
Silver	0.0039	0.0050	0.005000	0	78.0	50	150			J
Sodium	0.66	1.0	0.5000	0	132	50	150			J
Zinc	0.0065	0.010	0.005000	0	129	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54626**	RunNo: **54626**
Prep Date:	Analysis Date: **10/3/2018**	SeqNo: **1812096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.8	85	115			
Calcium	47	1.0	50.00	0	94.8	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.48	0.020	0.5000	0	95.6	85	115			
Magnesium	49	1.0	50.00	0	98.0	85	115			
Manganese	0.49	0.0020	0.5000	0	97.5	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**A54626**	RunNo:	**54626**
Prep Date:		Analysis Date:	**10/3/2018**	SeqNo:	**1812096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	99.3	85	115			
Sodium	49	1.0	50.00	0	98.2	85	115			
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40396**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40396**	RunNo:	**54217**
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793814** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	0.0012	0.0050								J
Zinc	ND	0.010								

Sample ID	**LLLCS-40396**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40396**	RunNo:	**54217**
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793815** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0015	0.0020	0.002000	0	76.0	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Chromium	0.0062	0.0060	0.006000	0	103	50	150			
Iron	0.020	0.020	0.02000	0	101	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Silver	0.0062	0.0050	0.005000	0	124	50	150			
Zinc	0.0068	0.010	0.005000	0	137	50	150			J

Sample ID	**LCS-40396**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40396**	RunNo:	**54217**
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.0	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.9	85	115			
Silver	0.094	0.0050	0.1000	0	93.5	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Sample ID	**1809712-001FMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**OW-1**	Batch ID:	**40396**	RunNo:	**54217**
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1794122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0.07165	96.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809712-001FMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**OW-1**	Batch ID:	**40396**		RunNo:	**54217**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**		SeqNo:	**1794122**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Chromium	0.49	0.0060	0.5000	0.02420	93.3	70	130			
Manganese	0.61	0.0020	0.5000	0.1136	100	70	130			
Silver	0.094	0.0050	0.1000	0	93.8	70	130			
Zinc	0.52	0.010	0.5000	0.02159	99.2	70	130			

Sample ID	**1809712-001FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**OW-1**	Batch ID:	**40396**		RunNo:	**54217**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**		SeqNo:	**1794123**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0.07165	95.3	70	130	0.924	20	
Cadmium	0.48	0.0020	0.5000	0	96.6	70	130	1.10	20	
Chromium	0.48	0.0060	0.5000	0.02420	91.6	70	130	1.73	20	
Manganese	0.61	0.0020	0.5000	0.1136	98.3	70	130	1.39	20	
Silver	0.093	0.0050	0.1000	0	93.0	70	130	0.921	20	
Zinc	0.51	0.010	0.5000	0.02159	98.1	70	130	1.09	20	

Sample ID	**MB-40396**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**40396**		RunNo:	**54270**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795707**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								

Sample ID	**LLLCS-40396**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40396**		RunNo:	**54270**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795711**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0054	0.0060	0.006000	0	89.7	50	150			J

Sample ID	**LCS-40396**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**40396**		RunNo:	**54270**				
Prep Date:	**9/17/2018**	Analysis Date:	**9/19/2018**		SeqNo:	**1795712**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.48	0.0060	0.5000	0	96.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**1809712-001FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**OW-1**	Batch ID: **40396**			RunNo: **54270**					
Prep Date:	**9/17/2018**	Analysis Date: **9/19/2018**			SeqNo: **1795746**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.51	0.0060	0.5000	0	102	70	130			

Sample ID	**1809712-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**OW-1**	Batch ID: **40396**			RunNo: **54270**					
Prep Date:	**9/17/2018**	Analysis Date: **9/19/2018**			SeqNo: **1795747**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.50	0.0060	0.5000	0	101	70	130	1.30	20	

Sample ID	**1809712-001FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**OW-1**	Batch ID: **40396**			RunNo: **54270**					
Prep Date:	**9/17/2018**	Analysis Date: **9/19/2018**			SeqNo: **1795749**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.3	0.10	0.5000	2.029	248	70	130			S

Sample ID	**1809712-001FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**OW-1**	Batch ID: **40396**			RunNo: **54270**					
Prep Date:	**9/17/2018**	Analysis Date: **9/19/2018**			SeqNo: **1795750**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.4	0.10	0.5000	2.029	268	70	130	3.05	20	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**B54299**	RunNo:	**54299**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1796682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B54299**	RunNo:	**54299**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1796683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.3	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00096	0.0010	0.001000	0	95.5	50	150			J

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B54299**	RunNo:	**54299**
Prep Date:		Analysis Date:	**9/20/2018**	SeqNo:	**1796684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.9	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**B54342**	RunNo:	**54342**
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798638** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B54342**	RunNo:	**54342**
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798639** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	99.7	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.5	50	150			J
Selenium	0.00091	0.0010	0.001000	0	91.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B54342**	RunNo:	**54342**
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798639** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	102	50	150			

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B54342**	RunNo:	**54342**
Prep Date:		Analysis Date:	**9/21/2018**	SeqNo:	**1798640** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.1	85	115			
Lead	0.012	0.00050	0.01250	0	96.8	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	96.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40396**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40396**	RunNo:	**54234**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793527**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40396**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40396**	RunNo:	**54234**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793528**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	95.3	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.9	50	150			J
Selenium	0.00094	0.0010	0.001000	0	93.5	50	150			J
Uranium	0.00046	0.00050	0.0005000	0	92.8	50	150			J

Sample ID	**MSLCS-40396**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40396**	RunNo:	**54234**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/18/2018**	SeqNo:	**1793529**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.1	85	115			
Selenium	0.024	0.0010	0.02500	0	95.3	85	115			
Uranium	0.012	0.00050	0.01250	0	95.0	85	115			

Sample ID	**1809712-002FMSLL**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB14**	Batch ID:	**40396**	RunNo:	**54263**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1795244**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.0	70	130			
Lead	0.012	0.00050	0.01250	0	96.5	70	130			
Selenium	0.024	0.0010	0.02500	0	94.5	70	130			
Uranium	0.012	0.00050	0.01250	0	94.3	70	130			

Sample ID	**1809712-002FMSDL**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**FB14**	Batch ID:	**40396**	RunNo:	**54263**					
Prep Date:	**9/17/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1795245**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **1809712-002FMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

Client ID: **FB14** Batch ID: **40396** RunNo: **54263**

Prep Date: **9/17/2018** Analysis Date: **9/19/2018** SeqNo: **1795245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	70	130	0.0785	20	
Lead	0.012	0.00050	0.01250	0	96.5	70	130	0.0299	20	
Selenium	0.024	0.0010	0.02500	0	94.6	70	130	0.0984	20	
Uranium	0.012	0.00050	0.01250	0	95.9	70	130	1.69	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40576**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40576**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803840**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000085	0.00020								J

Sample ID	**LCS-40576**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40576**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.1	80	120			

Sample ID	**1809712-001EMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-1**	Batch ID:	**40576**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803843**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	.00008133	98.3	75	125			

Sample ID	**1809712-001EMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**OW-1**	Batch ID:	**40576**	RunNo:	**54438**					
Prep Date:	**9/25/2018**	Analysis Date:	**9/26/2018**	SeqNo:	**1803844**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00008133	96.7	75	125	1.66	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54173**	RunNo: **54173**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1791002** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.16	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54173**	RunNo: **54173**
Prep Date:	Analysis Date: **9/13/2018**	SeqNo: **1791003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.56	0.10	0.5000	0	112	90	110			S
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	101	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	105	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	101	90	110			
Sulfate	9.8	0.50	10.00	0	98.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.5	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	94.2	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Sample ID **1809712-002DMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB14**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	66.7	127			
Chloride	4.6	0.50	5.000	0	92.4	77.5	116			
Bromide	2.4	0.10	2.500	0	94.5	80.2	111			
Sulfate	9.1	0.50	10.00	0	91.2	74.9	123			

Sample ID **1809712-002DMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB14**	Batch ID: **R54228**	RunNo: **54228**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794727** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	66.7	127	0.300	20	
Chloride	4.7	0.50	5.000	0	93.1	77.5	116	0.755	20	
Bromide	2.4	0.10	2.500	0	94.5	80.2	111	0.00497	20	
Sulfate	9.1	0.50	10.00	0	91.4	74.9	123	0.175	20	

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54385**	RunNo: **54385**
Prep Date:	Analysis Date: **9/24/2018**	SeqNo: **1801215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID	**MB-40465**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**40465**	RunNo:	**54304**					
Prep Date:	**9/20/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796962**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-40465**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**40465**	RunNo:	**54304**					
Prep Date:	**9/20/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796966**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	110	70	130			

Sample ID	**1809712-001CMS**	SampType:	**MS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-1**	Batch ID:	**40465**	RunNo:	**54304**					
Prep Date:	**9/20/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796987**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.065	0.0094	0.09358	0	69.4	55	125			

Sample ID	**1809712-001CMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**OW-1**	Batch ID:	**40465**	RunNo:	**54304**					
Prep Date:	**9/20/2018**	Analysis Date:	**9/20/2018**	SeqNo:	**1796988**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.075	0.0093	0.09333	0	80.6	55	125	14.6	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **LCS-40368**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.8	1.0	5.000	0	96.2	70	130			
Surr: DNOP	0.47		0.5000		93.9	76.7	135			

Sample ID **MB-40368**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.7	76.7	135			

Sample ID **1809712-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-1**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	82.8	143			
Surr: DNOP	0.53		0.5000		106	76.7	135			

Sample ID **1809712-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **OW-1**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	105	82.8	143	6.27	20	
Surr: DNOP	0.52		0.5000		105	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.9	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	105	79.5	127			
Surr: BFB	21		20.00		105	69.3	150			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **GW54206**	RunNo: **54206**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **GW54206**	RunNo: **54206**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	109	79.5	127			
Surr: BFB	22		20.00		110	69.3	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54185**	RunNo: **54185**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792541** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	96.3	70	130			
Chlorobenzene	20	1.0	20.00	0	98.2	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.5	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54185**	RunNo: **54185**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792544** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54185**	RunNo: **54185**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792544** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	1.4	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54185**	RunNo: **54185**
Prep Date:	Analysis Date: **9/17/2018**	SeqNo: **1792544** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.4	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.0	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.6	70	130			
Surr: Toluene-d8	9.1		10.00		91.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794532** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.7	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**
11-Oct-18

Client: Andeavor Gallup
Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**	
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809712**

11-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.0	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1809712 | RcptNo: 1

Received By: **Michelle Garcia** 9/13/2018 9:05:00 AM Michelle Garcia

Completed By: **Ashley Gallegos** 9/13/2018 10:19:00 AM

Reviewed By: ENM 9/14/18 Labeled by: JAB 09/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	FedEx		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☑	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? No
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JAB 09/14/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks: Sample 003A container 3 of 3 was broken in transit.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: X Yes ☐ No
Sample Temperature: (1) 3.5 - 0.4 CF = 3.1
(2) 1.4 - 0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/11/18	0815	H_2O	OW-1	40ml VOA-5	HCl	1809712 -001			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date: 9/12/18 Time: 0700 Relinquished by:
Received by: Michelle Gee Date: 09/13/18 Time: 0905
Date: Time: Relinquished by:
Received by: Fedex Date: Time:

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other _____
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: (1) 3.5 - 0.4 CF = 3.1 (2) 1.4 - 0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/11/18	0845	H_2O	FB14	40ml VOA-5	HCl	1809712-002			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/12/18	0700			09/13/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Fedex		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other _____
X EDD (Type) EXCEL

Turn-Around Time:
X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**
On Ice: X Yes ☐ No
Sample Temperature: (1) 3.5-0.4 CF = 3.1
(2) 1.4-0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/11/18	1045	H_2O	OW-10	40ml VOA-5	HCl	180712-003			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Analysis Request

Date	Time	Relinquished by	Received by	Date	Time
9/12/18	0700			09/12/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time
					Fedex

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: (1) 3.5 -0.4 CF = 3.1 (2) 1.4 -0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809712	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
9/11/18	1330	H_2O	OW-13	40ml VOA-5	HCl	-004			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date	Time	Relinquished by:	Received by:	Date	Time
9/12/18	0700			09/13/18	0905
			Fedex		

Remarks:

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard X Level 4 (Full Validation)
☐ Other
X EDD (Type) **EXCEL**

Turn-Around Time:
X Standard ☐ Rush
Project Name: **3rd Quarter 2018**
Groundwater Sampling
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: X Yes ☐ No
Sample Temperature: (1) 3.5 - 0.4 CF = 3.1 (2) 1.4 - 0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
2/1/18	1440	H_2O	OW-14	40ml VOA-5	HCl	1809712 -005			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/12/18	0900			02/13/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Chain-of-Custody Record

Client: **Andeavor**
Gallup Refinery
Mailing Address: **92 Giant Crossing Road**
Gallup, NM 87301
Phone #: **505-726-9745**
email or Fax#: **Brian.Moore@Andeavor.com**
QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) **EXCEL**

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: **3rd Quarter 2018 Groundwater Sampling**
Project #:
Project Manager: **Brian Moore**
Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: (1) 3.5 - 0.4CF = 3.1 (2) 1.4 - 0.4CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809712	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)				Air Bubbles (Y or N)
9/11/18	1620	H_2O	OW-29	40ml VOA-5	HCl	-DOLC			X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/12/18	0700			09/13/18	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
Fedex

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)
☐ Other
☒ EDD (Type) EXCEL

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: **3rd Quarter 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**
On Ice: ☒ Yes ☐ No
Sample Temperature: (1) 3.5 -0.4 CF = 3.1 (2) 1.4 -0.4 CF = 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB & EDC (Method 8011)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
			DUP15			1809712																
9/11/18	—	H_2O	[redacted]	40ml VOA-5	HCl				X							X						
				40ml VOA-3	$Na_2S_2O_3$						X											
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
9/11/18	—	H_2O	TRIP BLANK	40 mL VOA 3	HCl	-008										X						

Date: 9/12/18 Time: 0700 Relinquished by: [signature]
Received by: [signature] Date: 09/13/18 Time: 0905

Date: Time: Relinquished by:
Received by: Date: Time:

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

FedEx

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 17, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: Annual 2018 Groundwater Sampling OrderNo.: 1809856

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/14/2018 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 11, 2018.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1809856**
Date: **10/17/2018**

CLIENT: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Analytical Notes Regarding EPA Method 8260:
1,4-Dioxane was added too close to the holding time and was analzyed one day past the holding time. All samples are nondetect for 1,4-Dioxane.

Analytical Notes Regarding EPA Mehtod 8270:
Sample SMW-4 was scanned for Quinoline by the mass spec and was not detected.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 2:59:15 PM	G54175
Surr: BFB	94.3	0	69.3-150		%Rec	1	9/14/2018 2:59:15 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Acetone	4.5	0.79	10	J	µg/L	1	9/18/2018 1:55:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 1:55:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 1:55:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 1:55:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 1:55:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 1:55:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 1:55:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 1:59:42 PM	R54482
Surr: 1,2-Dichloroethane-d4	87.9	0	70-130		%Rec	1	9/18/2018 1:55:00 PM	R54215
Surr: 4-Bromofluorobenzene	91.4	0	70-130		%Rec	1	9/18/2018 1:55:00 PM	R54215
Surr: Dibromofluoromethane	96.5	0	70-130		%Rec	1	9/18/2018 1:55:00 PM	R54215
Surr: Toluene-d8	90.2	0	70-130		%Rec	1	9/18/2018 1:55:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 9:28:57 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 9:28:57 PM	40368
Surr: DNOP	105	0	76.7-135		%Rec	1	9/17/2018 9:28:57 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.4	0.16	0.50		mg/L	5	9/14/2018 7:23:50 PM	R54146
Chloride	33	0.91	2.5		mg/L	5	9/14/2018 7:23:50 PM	R54146
Bromide	0.16	0.13	0.50	J	mg/L	5	9/14/2018 7:23:50 PM	R54146
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5	H	mg/L	5	9/14/2018 7:23:50 PM	R54146
Sulfate	230	4.1	10		mg/L	20	9/14/2018 7:36:15 PM	R54146
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	10/3/2018 1:30:08 AM	A54600

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.017	0.00099	0.0020		mg/L	1	10/2/2018 8:44:08 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 8:44:08 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:44:08 PM	A54598
Calcium	2.9	0.078	1.0		mg/L	1	10/2/2018 8:44:08 PM	A54598
Chromium	0.0013	0.0013	0.0060	J	mg/L	1	10/2/2018 8:44:08 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:44:08 PM	A54598
Iron	0.024	0.016	0.020		mg/L	1	10/2/2018 8:44:08 PM	A54598
Magnesium	0.41	0.25	1.0	J	mg/L	1	10/2/2018 8:44:08 PM	A54598
Manganese	0.0093	0.00039	0.0020		mg/L	1	10/2/2018 8:44:08 PM	A54598
Potassium	1.0	0.11	1.0		mg/L	1	10/2/2018 8:44:08 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:44:08 PM	A54598
Sodium	320	1.6	10		mg/L	10	10/2/2018 8:46:09 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 8:44:08 PM	A54598
Zinc	0.0058	0.0021	0.010	J	mg/L	1	10/2/2018 8:44:08 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:20:36 PM	C54404
Arsenic	ND	0.00042	0.0010		mg/L	1	9/25/2018 2:20:36 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:20:36 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:20:36 PM	C54404
Uranium	0.0081	0.000096	0.00050		mg/L	1	9/25/2018 2:20:36 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:07:19 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-1C
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 8:55:00 AM
Lab ID: 1809856-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.037	0.0010	0.0020		mg/L	1	9/25/2018 3:59:22 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 3:59:22 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 3:59:22 PM	40438
Chromium	0.0041	0.0018	0.0060	J	mg/L	1	9/25/2018 3:59:22 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 3:59:22 PM	40438
Iron	0.29	0.010	0.020		mg/L	1	9/25/2018 3:59:22 PM	40438
Manganese	0.038	0.0011	0.0020		mg/L	1	9/25/2018 3:59:22 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 3:59:22 PM	40438
Vanadium	0.0012	0.00076	0.050	J	mg/L	1	9/25/2018 3:59:22 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 3:59:22 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:14:33 AM	40438
Arsenic	ND	0.00041	0.0010		mg/L	1	9/24/2018 11:14:33 AM	40438
Lead	0.00077	0.00023	0.00050		mg/L	1	9/24/2018 11:14:33 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:14:33 AM	40438
Uranium	0.0081	0.000068	0.00050		mg/L	1	9/25/2018 9:36:01 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:09:33 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 4:09:39 PM	G54175
Surr: BFB	94.8	0	69.3-150		%Rec	1	9/14/2018 4:09:39 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Acetone	4.8	0.79	10	J	µg/L	1	9/18/2018 2:20:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 2:20:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 2:20:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 2:20:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 2:20:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 2:20:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 2:20:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 4:55:35 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.3	0	70-130		%Rec	1	9/18/2018 2:20:00 PM	R54215
Surr: 4-Bromofluorobenzene	92.6	0	70-130		%Rec	1	9/18/2018 2:20:00 PM	R54215
Surr: Dibromofluoromethane	94.6	0	70-130		%Rec	1	9/18/2018 2:20:00 PM	R54215
Surr: Toluene-d8	89.9	0	70-130		%Rec	1	9/18/2018 2:20:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 9:50:53 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 9:50:53 PM	40368
Surr: DNOP	111	0	76.7-135		%Rec	1	9/17/2018 9:50:53 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.031	0.10		mg/L	1	9/14/2018 8:13:27 PM	R54146
Chloride	ND	0.18	0.50		mg/L	1	9/14/2018 8:13:27 PM	R54146
Bromide	ND	0.027	0.10		mg/L	1	9/14/2018 8:13:27 PM	R54146
Phosphorus, Orthophosphate (As P)	0.11	0.093	0.50	JH	mg/L	1	9/14/2018 8:13:27 PM	R54146
Sulfate	ND	0.21	0.50		mg/L	1	9/14/2018 8:13:27 PM	R54146
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	10/3/2018 1:42:59 AM	A54600

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/2/2018 8:48:10 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 8:48:10 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:48:10 PM	A54598
Calcium	ND	0.078	1.0		mg/L	1	10/2/2018 8:48:10 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:48:10 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:48:10 PM	A54598
Iron	ND	0.016	0.020		mg/L	1	10/2/2018 8:48:10 PM	A54598
Magnesium	ND	0.25	1.0		mg/L	1	10/2/2018 8:48:10 PM	A54598
Manganese	ND	0.00039	0.0020		mg/L	1	10/2/2018 8:48:10 PM	A54598
Potassium	0.16	0.11	1.0	J	mg/L	1	10/2/2018 8:48:10 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:48:10 PM	A54598
Sodium	0.59	0.16	1.0	J	mg/L	1	10/2/2018 8:48:10 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 8:48:10 PM	A54598
Zinc	0.011	0.0021	0.010		mg/L	1	10/2/2018 8:48:10 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:22:56 PM	C54404
Arsenic	ND	0.00042	0.0010		mg/L	1	9/25/2018 2:22:56 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:22:56 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:22:56 PM	C54404
Uranium	ND	0.000096	0.00050		mg/L	1	9/25/2018 2:22:56 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:16:14 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB-15
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 9:25:00 AM
Lab ID: 1809856-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	9/25/2018 4:05:05 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:05:05 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:05:05 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:05:05 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:05:05 PM	40438
Iron	ND	0.010	0.020		mg/L	1	9/25/2018 4:05:05 PM	40438
Manganese	ND	0.0011	0.0020		mg/L	1	9/25/2018 4:05:05 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:05:05 PM	40438
Vanadium	ND	0.00076	0.050		mg/L	1	9/25/2018 4:05:05 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:05:05 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:16:54 AM	40438
Arsenic	ND	0.00041	0.0010		mg/L	1	9/24/2018 11:16:54 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:16:54 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:16:54 AM	40438
Uranium	ND	0.000068	0.00050		mg/L	1	9/25/2018 9:38:22 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:18:29 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 4:33:08 PM	G54175
Surr: BFB	94.8	0	69.3-150		%Rec	1	9/14/2018 4:33:08 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Acetone	ND	0.79	10		µg/L	1	9/18/2018 2:44:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 2:44:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 2:44:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 2:44:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 2:44:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 2:44:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 2:44:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 5:24:47 PM	R54482
Surr: 1,2-Dichloroethane-d4	90.7	0	70-130		%Rec	1	9/18/2018 2:44:00 PM	R54215
Surr: 4-Bromofluorobenzene	92.1	0	70-130		%Rec	1	9/18/2018 2:44:00 PM	R54215
Surr: Dibromofluoromethane	97.5	0	70-130		%Rec	1	9/18/2018 2:44:00 PM	R54215
Surr: Toluene-d8	89.1	0	70-130		%Rec	1	9/18/2018 2:44:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 10:12:56 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 10:12:56 PM	40368
Surr: DNOP	105	0	76.7-135		%Rec	1	9/17/2018 10:12:56 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.0	0.16	0.50		mg/L	5	9/14/2018 8:38:17 PM	R54146
Chloride	38	0.91	2.5		mg/L	5	9/14/2018 8:38:17 PM	R54146
Bromide	0.43	0.13	0.50	J	mg/L	5	9/14/2018 8:38:17 PM	R54146
Phosphorus, Orthophosphate (As P)	0.71	0.46	2.5	JH	mg/L	5	9/14/2018 8:38:17 PM	R54146
Sulfate	7.3	1.0	2.5		mg/L	5	9/14/2018 8:38:17 PM	R54146
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	10/3/2018 1:55:50 AM	A54600

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.15	0.00099	0.0020		mg/L	1	10/2/2018 8:52:34 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 8:52:34 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:52:34 PM	A54598
Calcium	8.6	0.078	1.0		mg/L	1	10/2/2018 8:52:34 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:52:34 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:52:34 PM	A54598
Iron	0.38	0.016	0.020	*	mg/L	1	10/2/2018 8:52:34 PM	A54598
Magnesium	3.2	0.25	1.0		mg/L	1	10/2/2018 8:52:34 PM	A54598
Manganese	0.14	0.00039	0.0020	*	mg/L	1	10/2/2018 8:52:34 PM	A54598
Potassium	0.55	0.11	1.0	J	mg/L	1	10/2/2018 8:52:34 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:52:34 PM	A54598
Sodium	340	1.6	10		mg/L	10	10/2/2018 8:54:37 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 8:52:34 PM	A54598
Zinc	0.0080	0.0021	0.010	J	mg/L	1	10/2/2018 8:52:34 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:29:56 PM	C54404
Arsenic	0.0076	0.00042	0.0010		mg/L	1	9/25/2018 2:29:56 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:29:56 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:29:56 PM	C54404
Uranium	ND	0.000096	0.00050		mg/L	1	9/25/2018 2:29:56 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:20:44 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2A
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 10:40:00 AM
Lab ID: 1809856-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.13	0.0010	0.0020		mg/L	1	9/25/2018 4:19:04 PM	40438
Beryllium	0.00029	0.00026	0.0020	J	mg/L	1	9/25/2018 4:19:04 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:19:04 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:19:04 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:19:04 PM	40438
Iron	0.43	0.010	0.020	*	mg/L	1	9/25/2018 4:19:04 PM	40438
Manganese	0.14	0.0011	0.0020	*	mg/L	1	9/25/2018 4:19:04 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:19:04 PM	40438
Vanadium	0.00093	0.00076	0.050	J	mg/L	1	9/25/2018 4:19:04 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:19:04 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:19:15 AM	40438
Arsenic	0.0078	0.00041	0.0010		mg/L	1	9/24/2018 11:19:15 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:19:15 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:19:15 AM	40438
Uranium	ND	0.000068	0.00050		mg/L	1	9/25/2018 9:40:43 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:23:00 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 4:56:33 PM	G54175
Surr: BFB	95.2	0	69.3-150		%Rec	1	9/14/2018 4:56:33 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Acetone	4.2	0.79	10	J	µg/L	1	9/18/2018 3:09:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 3:09:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 3:09:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 3:09:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 3:09:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 3:09:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 3:09:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 5:53:57 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.7	0	70-130		%Rec	1	9/18/2018 3:09:00 PM	R54215
Surr: 4-Bromofluorobenzene	93.4	0	70-130		%Rec	1	9/18/2018 3:09:00 PM	R54215
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	9/18/2018 3:09:00 PM	R54215
Surr: Toluene-d8	90.6	0	70-130		%Rec	1	9/18/2018 3:09:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 10:34:47 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 10:34:47 PM	40368
Surr: DNOP	104	0	76.7-135		%Rec	1	9/17/2018 10:34:47 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.7	0.16	0.50		mg/L	5	9/14/2018 12:09:32 PM	R54146
Chloride	31	0.91	2.5		mg/L	5	9/14/2018 12:09:32 PM	R54146
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 12:09:32 PM	R54146
Bromide	0.74	0.13	0.50		mg/L	5	9/14/2018 12:09:32 PM	R54146
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/14/2018 12:09:32 PM	R54146
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 12:09:32 PM	R54146
Sulfate	190	1.0	2.5		mg/L	5	9/14/2018 12:09:32 PM	R54146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.041	0.00099	0.0020		mg/L	1	10/2/2018 8:56:38 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 8:56:38 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 8:56:38 PM	A54598
Calcium	12	0.078	1.0		mg/L	1	10/2/2018 8:56:38 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 8:56:38 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 8:56:38 PM	A54598
Iron	0.16	0.016	0.020		mg/L	1	10/2/2018 8:56:38 PM	A54598
Magnesium	2.9	0.25	1.0		mg/L	1	10/2/2018 8:56:38 PM	A54598
Manganese	0.15	0.00039	0.0020	*	mg/L	1	10/2/2018 8:56:38 PM	A54598
Potassium	1.3	0.11	1.0		mg/L	1	10/2/2018 8:56:38 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 8:56:38 PM	A54598
Sodium	580	1.6	10		mg/L	10	10/2/2018 9:05:21 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 8:56:38 PM	A54598
Zinc	0.0063	0.0021	0.010	J	mg/L	1	10/2/2018 8:56:38 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:32:16 PM	C54404
Arsenic	0.00073	0.00042	0.0010	J	mg/L	1	9/25/2018 2:32:16 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:32:16 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:32:16 PM	C54404
Uranium	0.011	0.000096	0.00050		mg/L	1	9/25/2018 2:32:16 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:29:54 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-2B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 12:42:00 PM
Lab ID: 1809856-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.037	0.0010	0.0020		mg/L	1	9/25/2018 4:21:06 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:21:06 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:21:06 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:21:06 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:21:06 PM	40438
Iron	0.24	0.010	0.020		mg/L	1	9/25/2018 4:21:06 PM	40438
Manganese	0.15	0.0011	0.0020	*	mg/L	1	9/25/2018 4:21:06 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:21:06 PM	40438
Vanadium	0.0031	0.00076	0.050	J	mg/L	1	9/25/2018 4:21:06 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:21:06 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:31:03 AM	40438
Arsenic	0.00077	0.00041	0.0010	J	mg/L	1	9/24/2018 11:31:03 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:31:03 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:31:03 AM	40438
Uranium	0.010	0.000068	0.00050		mg/L	1	9/25/2018 9:52:26 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:32:11 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 5:20:02 PM	G54175
Surr: BFB	91.7	0	69.3-150		%Rec	1	9/14/2018 5:20:02 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Acetone	3.5	0.79	10	J	µg/L	1	9/18/2018 3:34:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 3:34:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 3:34:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 3:34:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 3:34:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 3:34:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 3:34:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 6:23:09 PM	R54482
Surr: 1,2-Dichloroethane-d4	88.8	0	70-130		%Rec	1	9/18/2018 3:34:00 PM	R54215
Surr: 4-Bromofluorobenzene	93.8	0	70-130		%Rec	1	9/18/2018 3:34:00 PM	R54215
Surr: Dibromofluoromethane	94.7	0	70-130		%Rec	1	9/18/2018 3:34:00 PM	R54215
Surr: Toluene-d8	90.0	0	70-130		%Rec	1	9/18/2018 3:34:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 10:56:50 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 10:56:50 PM	40368
Surr: DNOP	101	0	76.7-135		%Rec	1	9/17/2018 10:56:50 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.3	0.16	0.50		mg/L	5	9/14/2018 12:59:09 PM	R54146
Chloride	31	0.91	2.5		mg/L	5	9/14/2018 12:59:09 PM	R54146
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 12:59:09 PM	R54146
Bromide	0.45	0.13	0.50	J	mg/L	5	9/14/2018 12:59:09 PM	R54146
Nitrogen, Nitrate (As N)	0.063	0.033	0.50	J	mg/L	5	9/14/2018 12:59:09 PM	R54146
Phosphorus, Orthophosphate (As P)	1.2	0.46	2.5	J	mg/L	5	9/14/2018 12:59:09 PM	R54146
Sulfate	44	1.0	2.5		mg/L	5	9/14/2018 12:59:09 PM	R54146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.11	0.00099	0.0020		mg/L	1	10/2/2018 9:07:22 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 9:07:22 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 9:07:22 PM	A54598
Calcium	8.0	0.078	1.0		mg/L	1	10/2/2018 9:07:22 PM	A54598
Chromium	ND	0.0013	0.0060		mg/L	1	10/2/2018 9:07:22 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 9:07:22 PM	A54598
Iron	0.41	0.016	0.020	*	mg/L	1	10/2/2018 9:07:22 PM	A54598
Magnesium	2.6	0.25	1.0		mg/L	1	10/2/2018 9:07:22 PM	A54598
Manganese	0.11	0.00039	0.0020	*	mg/L	1	10/2/2018 9:07:22 PM	A54598
Potassium	0.79	0.11	1.0	J	mg/L	1	10/2/2018 9:07:22 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 9:07:22 PM	A54598
Sodium	390	1.6	10		mg/L	10	10/2/2018 9:09:26 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 9:07:22 PM	A54598
Zinc	0.0076	0.0021	0.010	J	mg/L	1	10/2/2018 9:07:22 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:34:38 PM	C54404
Arsenic	0.0047	0.00042	0.0010		mg/L	1	9/25/2018 2:34:38 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:34:38 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:34:38 PM	C54404
Uranium	0.00019	0.000096	0.00050	J	mg/L	1	9/25/2018 2:34:38 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:34:28 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: BW-3B
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 2:00:00 PM
Lab ID: 1809856-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.11	0.0010	0.0020		mg/L	1	9/25/2018 4:23:13 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:23:13 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:23:13 PM	40438
Chromium	0.0024	0.0018	0.0060	J	mg/L	1	9/25/2018 4:23:13 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:23:13 PM	40438
Iron	0.87	0.010	0.020	*	mg/L	1	9/25/2018 4:23:13 PM	40438
Manganese	0.12	0.0011	0.0020	*	mg/L	1	9/25/2018 4:23:13 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:23:13 PM	40438
Vanadium	0.0026	0.00076	0.050	J	mg/L	1	9/25/2018 4:23:13 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:23:13 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:35:44 AM	40438
Arsenic	0.0049	0.00041	0.0010		mg/L	1	9/24/2018 11:35:44 AM	40438
Lead	0.00035	0.00023	0.00050	J	mg/L	1	9/24/2018 11:35:44 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:35:44 AM	40438
Uranium	0.00016	0.000068	0.00050	J	mg/L	1	9/25/2018 9:57:10 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:36:46 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 5:43:31 PM	G54175
Surr: BFB	96.1	0	69.3-150		%Rec	1	9/14/2018 5:43:31 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Acetone	4.5	0.79	10	J	µg/L	1	9/18/2018 3:59:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 3:59:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 3:59:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 3:59:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 3:59:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 3:59:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 3:59:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 6:52:26 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.3	0	70-130		%Rec	1	9/18/2018 3:59:00 PM	R54215
Surr: 4-Bromofluorobenzene	92.1	0	70-130		%Rec	1	9/18/2018 3:59:00 PM	R54215
Surr: Dibromofluoromethane	95.8	0	70-130		%Rec	1	9/18/2018 3:59:00 PM	R54215
Surr: Toluene-d8	91.3	0	70-130		%Rec	1	9/18/2018 3:59:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 11:18:56 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 11:18:56 PM	40368
Surr: DNOP	99.0	0	76.7-135		%Rec	1	9/17/2018 11:18:56 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.97	0.16	0.50		mg/L	5	9/14/2018 1:23:59 PM	R54146
Chloride	59	0.91	2.5		mg/L	5	9/14/2018 1:23:59 PM	R54146
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 1:23:59 PM	R54146
Bromide	0.21	0.13	0.50	J	mg/L	5	9/14/2018 1:23:59 PM	R54146
Nitrogen, Nitrate (As N)	0.12	0.033	0.50	J	mg/L	5	9/14/2018 1:23:59 PM	R54146
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 1:23:59 PM	R54146
Sulfate	160	1.0	2.5		mg/L	5	9/14/2018 1:23:59 PM	R54146

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.019	0.00099	0.0020		mg/L	1	10/2/2018 9:11:27 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 9:11:27 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 9:11:27 PM	A54598
Calcium	3.7	0.078	1.0		mg/L	1	10/2/2018 9:11:27 PM	A54598
Chromium	0.0042	0.0013	0.0060	J	mg/L	1	10/2/2018 9:11:27 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 9:11:27 PM	A54598
Iron	0.079	0.016	0.020		mg/L	1	10/2/2018 9:11:27 PM	A54598
Magnesium	0.99	0.25	1.0	J	mg/L	1	10/2/2018 9:11:27 PM	A54598
Manganese	0.0042	0.00039	0.0020		mg/L	1	10/2/2018 9:11:27 PM	A54598
Potassium	0.62	0.11	1.0	J	mg/L	1	10/2/2018 9:11:27 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 9:11:27 PM	A54598
Sodium	300	1.6	10		mg/L	10	10/2/2018 9:13:27 PM	A54598
Vanadium	0.045	0.0019	0.050	J	mg/L	1	10/2/2018 9:11:27 PM	A54598
Zinc	0.0094	0.0021	0.010	J	mg/L	1	10/2/2018 9:11:27 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:36:57 PM	C54404
Arsenic	0.0029	0.00042	0.0010		mg/L	1	9/25/2018 2:36:57 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:36:57 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:36:57 PM	C54404
Uranium	0.029	0.00048	0.0025		mg/L	5	9/26/2018 12:49:24 PM	B54444
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:39:04 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.027	0.0010	0.0020		mg/L	1	9/25/2018 4:25:00 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:25:00 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:25:00 PM	40438
Chromium	0.017	0.0018	0.0060		mg/L	1	9/25/2018 4:25:00 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:25:00 PM	40438
Iron	0.71	0.010	0.020	*	mg/L	1	9/25/2018 4:25:00 PM	40438
Manganese	0.022	0.0011	0.0020		mg/L	1	9/25/2018 4:25:00 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:25:00 PM	40438
Vanadium	0.049	0.00076	0.050	J	mg/L	1	9/25/2018 4:25:00 PM	40438
Zinc	0.0058	0.0033	0.010	J	mg/L	1	9/25/2018 4:25:00 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:38:07 AM	40438
Arsenic	0.0031	0.00041	0.0010		mg/L	1	9/24/2018 11:38:07 AM	40438
Lead	0.00088	0.00023	0.00050		mg/L	1	9/24/2018 11:38:07 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:38:07 AM	40438
Uranium	0.030	0.00034	0.0025		mg/L	5	9/25/2018 10:20:43 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:41:22 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Acenaphthylene	ND	6.2	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Aniline	ND	6.2	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Anthracene	ND	5.7	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Azobenzene	ND	6.7	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Benzoic acid	6.4	6.3	20	J	µg/L	1	9/21/2018 6:27:43 PM	40375
Benzyl alcohol	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Carbazole	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Chloroaniline	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Chlorophenol	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Chrysene	ND	6.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Dibenzofuran	ND	6.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Diethyl phthalate	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: SMW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018 3:50:00 PM
Lab ID: 1809856-006F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Fluoranthene	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Fluorene	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Hexachloroethane	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Isophorone	ND	6.2	10		µg/L	1	9/21/2018 6:27:43 PM	40375
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Methylphenol	ND	6.3	10		µg/L	1	9/21/2018 6:27:43 PM	40375
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/21/2018 6:27:43 PM	40375
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Naphthalene	ND	5.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Nitroaniline	ND	5.9	10		µg/L	1	9/21/2018 6:27:43 PM	40375
3-Nitroaniline	ND	6.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Nitroaniline	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Nitrobenzene	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2-Nitrophenol	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
4-Nitrophenol	ND	5.6	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Pentachlorophenol	ND	5.3	20		µg/L	1	9/21/2018 6:27:43 PM	40375
Phenanthrene	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Phenol	ND	6.0	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Pyrene	ND	6.5	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Pyridine	ND	5.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/21/2018 6:27:43 PM	40375
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/21/2018 6:27:43 PM	40375
Surr: 2-Fluorophenol	30.4	0	15-74.1		%Rec	1	9/21/2018 6:27:43 PM	40375
Surr: Phenol-d5	23.4	0	15-59.8		%Rec	1	9/21/2018 6:27:43 PM	40375
Surr: 2,4,6-Tribromophenol	53.7	0	22.1-112		%Rec	1	9/21/2018 6:27:43 PM	40375
Surr: Nitrobenzene-d5	45.2	0	33.2-94		%Rec	1	9/21/2018 6:27:43 PM	40375
Surr: 2-Fluorobiphenyl	47.7	0	34-90.9		%Rec	1	9/21/2018 6:27:43 PM	40375
Surr: 4-Terphenyl-d14	89.3	0	15-149		%Rec	1	9/21/2018 6:27:43 PM	40375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/14/2018 6:06:54 PM	G54175
Surr: BFB	92.7	0	69.3-150		%Rec	1	9/14/2018 6:06:54 PM	G54175
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Acetone	ND	0.79	10		µg/L	1	9/18/2018 4:24:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 4:24:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 4:24:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 4:24:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 4:24:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 4:24:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 4:24:00 PM	R54215
1,4-Dioxane	ND	4.1	10	H	µg/L	1	9/27/2018 7:21:32 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.5	0	70-130		%Rec	1	9/18/2018 4:24:00 PM	R54215
Surr: 4-Bromofluorobenzene	93.6	0	70-130		%Rec	1	9/18/2018 4:24:00 PM	R54215
Surr: Dibromofluoromethane	95.6	0	70-130		%Rec	1	9/18/2018 4:24:00 PM	R54215
Surr: Toluene-d8	89.7	0	70-130		%Rec	1	9/18/2018 4:24:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/17/2018 11:41:00 PM	40368
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/17/2018 11:41:00 PM	40368
Surr: DNOP	103	0	76.7-135		%Rec	1	9/17/2018 11:41:00 PM	40368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.2	0.16	0.50		mg/L	5	10/4/2018 11:44:25 AM	R54671
Chloride	34	0.91	2.5		mg/L	5	10/4/2018 11:44:25 AM	R54671
Bromide	0.17	0.13	0.50	J	mg/L	5	10/4/2018 11:44:25 AM	R54671
Phosphorus, Orthophosphate (As P)	0.85	0.15	2.5	JH	mg/L	5	10/4/2018 11:44:25 AM	R54671
Sulfate	240	2.5	10		mg/L	20	10/4/2018 11:57:16 AM	R54671
Nitrate+Nitrite as N	ND	0.079	1.0		mg/L	5	10/4/2018 1:40:10 PM	R54671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.017	0.00099	0.0020		mg/L	1	10/2/2018 9:15:28 PM	A54598
Beryllium	ND	0.00029	0.0020		mg/L	1	10/2/2018 9:15:28 PM	A54598
Cadmium	ND	0.0010	0.0020		mg/L	1	10/2/2018 9:15:28 PM	A54598
Calcium	2.9	0.078	1.0		mg/L	1	10/2/2018 9:15:28 PM	A54598
Chromium	0.0020	0.0013	0.0060	J	mg/L	1	10/2/2018 9:15:28 PM	A54598
Copper	ND	0.0032	0.0060		mg/L	1	10/2/2018 9:15:28 PM	A54598
Iron	0.028	0.016	0.020		mg/L	1	10/2/2018 9:15:28 PM	A54598
Magnesium	0.41	0.25	1.0	J	mg/L	1	10/2/2018 9:15:28 PM	A54598
Manganese	0.0094	0.00039	0.0020		mg/L	1	10/2/2018 9:15:28 PM	A54598
Potassium	0.93	0.11	1.0	J	mg/L	1	10/2/2018 9:15:28 PM	A54598
Silver	ND	0.0018	0.0050		mg/L	1	10/2/2018 9:15:28 PM	A54598
Sodium	310	1.6	10		mg/L	10	10/2/2018 9:17:28 PM	A54598
Vanadium	ND	0.0019	0.050		mg/L	1	10/2/2018 9:15:28 PM	A54598
Zinc	0.0089	0.0021	0.010	J	mg/L	1	10/2/2018 9:15:28 PM	A54598
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:39:17 PM	C54404
Arsenic	ND	0.00042	0.0010		mg/L	1	9/25/2018 2:39:17 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:39:17 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:39:17 PM	C54404
Uranium	0.0081	0.000096	0.00050		mg/L	1	9/25/2018 2:39:17 PM	C54404
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:43:33 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/12/2018
Lab ID: 1809856-007E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.024	0.0010	0.0020		mg/L	1	9/25/2018 4:26:48 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:26:48 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:26:48 PM	40438
Chromium	0.0043	0.0018	0.0060	J	mg/L	1	9/25/2018 4:26:48 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:26:48 PM	40438
Iron	0.22	0.010	0.020		mg/L	1	9/25/2018 4:26:48 PM	40438
Manganese	0.024	0.0011	0.0020		mg/L	1	9/25/2018 4:26:48 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:26:48 PM	40438
Vanadium	0.00083	0.00076	0.050	J	mg/L	1	9/25/2018 4:26:48 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:26:48 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:40:28 AM	40438
Arsenic	ND	0.00041	0.0010		mg/L	1	9/24/2018 11:40:28 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:40:28 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:40:28 AM	40438
Uranium	0.0081	0.000068	0.00050		mg/L	1	9/25/2018 10:01:53 AM	40438
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	10/5/2018 12:45:45 PM	40811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809856-008A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Toluene	ND	0.17	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Naphthalene	ND	0.29	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Acetone	ND	0.79	10		µg/L	1	9/18/2018 4:48:00 PM	R54215
Bromobenzene	ND	0.32	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Bromoform	ND	0.32	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Bromomethane	ND	0.26	3.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
2-Butanone	ND	1.3	10		µg/L	1	9/18/2018 4:48:00 PM	R54215
Carbon disulfide	ND	0.39	10		µg/L	1	9/18/2018 4:48:00 PM	R54215
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Chloroethane	ND	0.16	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Chloroform	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Chloromethane	ND	0.29	3.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Dibromomethane	ND	0.32	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: TRIP BLANK
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809856-008A
Matrix: Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
2-Hexanone	ND	0.91	10		µg/L	1	9/18/2018 4:48:00 PM	R54215
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/18/2018 4:48:00 PM	R54215
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Styrene	ND	0.25	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/18/2018 4:48:00 PM	R54215
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/18/2018 4:48:00 PM	R54215
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 7:50:36 PM	R54482
Surr: 1,2-Dichloroethane-d4	91.3	0	70-130		%Rec	1	9/18/2018 4:48:00 PM	R54215
Surr: 4-Bromofluorobenzene	92.8	0	70-130		%Rec	1	9/18/2018 4:48:00 PM	R54215
Surr: Dibromofluoromethane	97.4	0	70-130		%Rec	1	9/18/2018 4:48:00 PM	R54215
Surr: Toluene-d8	90.5	0	70-130		%Rec	1	9/18/2018 4:48:00 PM	R54215

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:29	WG1168671

Method Blank (MB)

(MB) R3344390-1 09/24/18 08:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1027212-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1027212-01 09/24/18 08:38 • (DUP) R3344390-9 09/24/18 08:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.00323	1	200	J P1	20

L1026830-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1026830-02 09/24/18 08:17 • (DUP) R3344390-10 09/24/18 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00237	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344390-2 09/24/18 08:11 • (LCSD) R3344390-3 09/24/18 08:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.104	101	104	85.0-115			2.93	20

L1027138-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-01 09/24/18 08:23 • (MS) R3344390-5 09/24/18 08:24 • (MSD) R3344390-11 09/24/18 08:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0707	0.0644	70.7	64.4	1	75.0-125	J6	J6	9.33	20

L1027138-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-04 09/24/18 08:35 • (MS) R3344390-7 09/24/18 08:36 • (MSD) R3344390-8 09/24/18 08:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0933	0.104	93.3	104	1	75.0-125			10.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.5	50	150			J
Beryllium	0.0018	0.0020	0.002000	0	91.5	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0067	0.0060	0.006000	0	112	50	150			
Iron	0.019	0.020	0.02000	0	93.5	50	150			J
Magnesium	0.49	1.0	0.5000	0	98.8	50	150			J
Manganese	0.0020	0.0020	0.002000	0	103	50	150			
Potassium	0.51	1.0	0.5000	0	102	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.6	50	150			J
Sodium	0.53	1.0	0.5000	0	106	50	150			J
Vanadium	0.0095	0.050	0.01000	0	95.4	50	150			J
Zinc	0.0064	0.010	0.005000	0	128	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A54598**	RunNo: **54598**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1810780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.7	85	115			
Beryllium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	49	1.0	50.00	0	97.0	85	115			
Chromium	0.49	0.0060	0.5000	0	98.9	85	115			
Copper	0.49	0.0060	0.5000	0	97.5	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Magnesium	49	1.0	50.00	0	98.4	85	115			
Manganese	0.48	0.0020	0.5000	0	96.8	85	115			
Potassium	49	1.0	50.00	0	97.4	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	48	1.0	50.00	0	96.0	85	115			
Vanadium	0.50	0.050	0.5000	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40438**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID	**LCS-40438**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.4	85	115			
Beryllium	0.53	0.0020	0.5000	0	106	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.3	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Vanadium	0.51	0.050	0.5000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.9	85	115			

Sample ID	**LLLCS-40438**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802865** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	77.5	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.8	50	150			J
Copper	0.0071	0.0060	0.006000	0	118	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**LLLCS-40438**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802865**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vanadium	0.010	0.050	0.01000	0	104	50	150			J
Zinc	0.0062	0.010	0.005000	0	123	50	150			J

Sample ID	**1809856-001EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BW-1C**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802898**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0.03682	89.6	70	130			
Beryllium	0.52	0.0020	0.5000	0	104	70	130			
Cadmium	0.47	0.0020	0.5000	0	93.0	70	130			
Chromium	0.46	0.0060	0.5000	0.004140	91.2	70	130			
Copper	0.49	0.0060	0.5000	0	99.0	70	130			
Iron	0.80	0.020	0.5000	0.2856	103	70	130			
Manganese	0.50	0.0020	0.5000	0.03791	93.1	70	130			
Silver	0.095	0.0050	0.1000	0	94.9	70	130			
Vanadium	0.49	0.050	0.5000	0.001240	98.1	70	130			
Zinc	0.47	0.010	0.5000	0	94.6	70	130			

Sample ID	**1809856-001EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BW-1C**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802899**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.03682	90.9	70	130	1.34	20	
Beryllium	0.52	0.0020	0.5000	0	105	70	130	0.524	20	
Cadmium	0.47	0.0020	0.5000	0	94.0	70	130	1.00	20	
Chromium	0.47	0.0060	0.5000	0.004140	92.2	70	130	1.07	20	
Copper	0.50	0.0060	0.5000	0	100	70	130	1.03	20	
Iron	0.81	0.020	0.5000	0.2856	104	70	130	0.655	20	
Manganese	0.51	0.0020	0.5000	0.03791	93.8	70	130	0.631	20	
Silver	0.096	0.0050	0.1000	0	96.3	70	130	1.50	20	
Vanadium	0.50	0.050	0.5000	0.001240	99.4	70	130	1.28	20	
Zinc	0.48	0.010	0.5000	0	95.3	70	130	0.735	20	

Sample ID	**1809856-002EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB-15**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802904**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**1809856-002EMS**	SampType:	**MS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB-15**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802904**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.1	70	130			
Beryllium	0.53	0.0020	0.5000	0	106	70	130			
Cadmium	0.48	0.0020	0.5000	0	95.9	70	130			
Chromium	0.47	0.0060	0.5000	0	94.5	70	130			
Copper	0.49	0.0060	0.5000	0	98.7	70	130			
Iron	0.51	0.020	0.5000	0	102	70	130			
Manganese	0.48	0.0020	0.5000	0	96.3	70	130			
Silver	0.096	0.0050	0.1000	0	96.0	70	130			
Vanadium	0.50	0.050	0.5000	0	100	70	130			
Zinc	0.48	0.010	0.5000	0	96.7	70	130			

Sample ID	**1809856-002EMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**FB-15**	Batch ID:	**40438**		RunNo:	**54392**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1802905**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.1	70	130	2.17	20	
Beryllium	0.52	0.0020	0.5000	0	105	70	130	0.659	20	
Cadmium	0.47	0.0020	0.5000	0	93.4	70	130	2.59	20	
Chromium	0.46	0.0060	0.5000	0	91.4	70	130	3.28	20	
Copper	0.48	0.0060	0.5000	0	96.4	70	130	2.30	20	
Iron	0.51	0.020	0.5000	0	103	70	130	0.725	20	
Manganese	0.48	0.0020	0.5000	0	95.2	70	130	1.25	20	
Silver	0.094	0.0050	0.1000	0	94.1	70	130	1.95	20	
Vanadium	0.49	0.050	0.5000	0	97.7	70	130	2.47	20	
Zinc	0.47	0.010	0.5000	0	94.3	70	130	2.58	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**PBW**	Batch ID:	**C54404**	RunNo:	**54404**
Prep Date:		Analysis Date:	**9/25/2018**	SeqNo:	**1801654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**C54404**	RunNo:	**54404**
Prep Date:		Analysis Date:	**9/25/2018**	SeqNo:	**1801655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.5	50	150			J
Arsenic	0.00094	0.0010	0.001000	0	93.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.9	50	150			J
Selenium	0.00094	0.0010	0.001000	0	93.8	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID	**MSLCS-C**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**C54404**	RunNo:	**54404**
Prep Date:		Analysis Date:	**9/25/2018**	SeqNo:	**1801656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.8	85	115			
Arsenic	0.023	0.0010	0.02500	0	92.2	85	115			
Lead	0.012	0.00050	0.01250	0	93.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.8	85	115			
Uranium	0.012	0.00050	0.01250	0	92.7	85	115			

Sample ID	**1809856-002DLLMS**	SampType:	**MS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**FB-15**	Batch ID:	**C54404**	RunNo:	**54404**
Prep Date:		Analysis Date:	**9/25/2018**	SeqNo:	**1801690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.5	70	130			
Arsenic	0.023	0.0010	0.02500	0	92.4	70	130			
Lead	0.012	0.00050	0.01250	0	92.1	70	130			
Selenium	0.023	0.0010	0.02500	0	93.7	70	130			
Uranium	0.012	0.00050	0.01250	0	93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**
17-Oct-18

Client: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Sample ID	**1809856-002DLLMS**	SampType: **MSD**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**FB-15**	Batch ID: **C54404**		RunNo: **54404**					
Prep Date:		Analysis Date: **9/25/2018**		SeqNo: **1801691**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.0	70	130	0.505	20	
Arsenic	0.023	0.0010	0.02500	0	92.0	70	130	0.351	20	
Lead	0.011	0.00050	0.01250	0	90.9	70	130	1.31	20	
Selenium	0.024	0.0010	0.02500	0	94.4	70	130	0.782	20	
Uranium	0.011	0.00050	0.01250	0	90.7	70	130	2.48	20	

Sample ID	**MB-B**	SampType: **MBLK**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B54444**		RunNo: **54444**					
Prep Date:		Analysis Date: **9/26/2018**		SeqNo: **1804113**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType: **LCSLL**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B54444**		RunNo: **54444**					
Prep Date:		Analysis Date: **9/26/2018**		SeqNo: **1804114**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00045	0.00050	0.0005000	0	90.6	50	150			J

Sample ID	**MSLCS-B**	SampType: **LCS**		TestCode: **EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B54444**		RunNo: **54444**					
Prep Date:		Analysis Date: **9/26/2018**		SeqNo: **1804115**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	88.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40438**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799696**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-40438**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799697**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00094	0.0010	0.001000	0	93.8	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.7	50	150			J
Selenium	0.00089	0.0010	0.001000	0	89.3	50	150			J

Sample ID	**MSLCS-40438**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799698**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	105	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			

Sample ID	**1809856-003ELLMS**	SampType:	**MSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BW-2A**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799706**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	111	70	130			
Arsenic	0.034	0.0010	0.02500	0.007788	104	70	130			
Lead	0.011	0.00050	0.01250	0	91.1	70	130			
Selenium	0.025	0.0010	0.02500	0	98.6	70	130			

Sample ID	**1809856-003ELLMS**	SampType:	**MSDLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BW-2A**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799707**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**1809856-003ELLMS**	SampType:	**MSDLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BW-2A**	Batch ID:	**40438**		RunNo:	**54361**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**		SeqNo:	**1799707**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.027	0.0010	0.02500	0	109	70	130	1.44	20	
Arsenic	0.033	0.0010	0.02500	0.007788	103	70	130	1.22	20	
Lead	0.011	0.00050	0.01250	0	88.5	70	130	2.89	20	
Selenium	0.024	0.0010	0.02500	0	95.5	70	130	3.15	20	

Sample ID	**1809856-004ELLMS**	SampType:	**MSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BW-2B**	Batch ID:	**40438**		RunNo:	**54361**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**		SeqNo:	**1799709**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.028	0.0010	0.02500	0	110	70	130			
Arsenic	0.027	0.0010	0.02500	0.0007740	105	70	130			
Lead	0.011	0.00050	0.01250	0	89.5	70	130			
Selenium	0.024	0.0010	0.02500	0	96.8	70	130			

Sample ID	**MB-40438**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**40438**		RunNo:	**54383**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1801124**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40438**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**40438**		RunNo:	**54383**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1801125**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	95.1	50	150			J

Sample ID	**MSLCS-40438**	SampType:	**LCS**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**LCSW**	Batch ID:	**40438**		RunNo:	**54383**				
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**		SeqNo:	**1801126**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	95.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**
17-Oct-18

Client: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Sample ID	**1809856-003ELLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BW-2A**	Batch ID: **40438**			RunNo: **54383**					
Prep Date:	**9/19/2018**	Analysis Date: **9/25/2018**			SeqNo: **1801131**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	93.6	70	130			

Sample ID	**1809856-003ELLMS**	SampType: **MSDLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BW-2A**	Batch ID: **40438**			RunNo: **54383**					
Prep Date:	**9/19/2018**	Analysis Date: **9/25/2018**			SeqNo: **1801132**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	91.9	70	130	1.85	20	

Sample ID	**1809856-004ELLMS**	SampType: **MSLL**			TestCode: **200.8 ICPMS Metals:Total**					
Client ID:	**BW-2B**	Batch ID: **40438**			RunNo: **54383**					
Prep Date:	**9/19/2018**	Analysis Date: **9/25/2018**			SeqNo: **1801134**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.022	0.00050	0.01250	0.01024	94.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40811**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**40811**	RunNo:	**54677**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814217**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-40811**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**40811**	RunNo:	**54677**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814218**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	95.6	80	120			

Sample ID	**1809856-001EMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**BW-1C**	Batch ID:	**40811**	RunNo:	**54677**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814221**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.0	75	125			

Sample ID	**1809856-001EMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**BW-1C**	Batch ID:	**40811**	RunNo:	**54677**					
Prep Date:	**10/4/2018**	Analysis Date:	**10/5/2018**	SeqNo:	**1814222**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.2	75	125	0.223	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54146**	RunNo: **54146**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	0.13	0.50								J
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54146**	RunNo: **54146**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Chloride	4.8	0.50	5.000	0	96.1	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	101	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.8	90	110			
Sulfate	9.5	0.50	10.00	0	95.2	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A54600**	RunNo: **54600**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1811050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A54600**	RunNo: **54600**
Prep Date:	Analysis Date: **10/2/2018**	SeqNo: **1811051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.4	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814039** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814039** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	0.17	0.50								J
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R54671**	RunNo: **54671**
Prep Date:	Analysis Date: **10/4/2018**	SeqNo: **1814040** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Chloride	4.7	0.50	5.000	0	93.4	90	110			
Bromide	2.4	0.10	2.500	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.8	90	110			
Sulfate	9.3	0.50	10.00	0	93.0	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **LCS-40368**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.8	1.0	5.000	0	96.2	70	130			
Surr: DNOP	0.47		0.5000		93.9	76.7	135			

Sample ID **MB-40368**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40368**	RunNo: **54191**
Prep Date: **9/17/2018**	Analysis Date: **9/17/2018**	SeqNo: **1792206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.7	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.9	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	105	79.5	127			
Surr: BFB	21		20.00		105	69.3	150			

Sample ID **1809856-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-1C**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.56	0.050	0.5000	0	113	52.5	149			
Surr: BFB	22		20.00		112	69.3	150			

Sample ID **1809856-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BW-1C**	Batch ID: **G54175**	RunNo: **54175**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.55	0.050	0.5000	0	110	52.5	149	1.94	20	
Surr: BFB	21		20.00		105	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794532** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.7	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794533** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.0	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Sample ID **1809856-001AMS**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-1C**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794548** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	60.5	137			
Toluene	19	1.0	20.00	0	94.7	70	130			
Chlorobenzene	20	1.0	20.00	0	98.4	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	9.0		10.00		89.8	70	130			

Sample ID **1809856-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BW-1C**	Batch ID: **R54215**	RunNo: **54215**
Prep Date:	Analysis Date: **9/18/2018**	SeqNo: **1794549** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.0	60.5	137	5.80	20	
Toluene	18	1.0	20.00	0	90.3	70	130	4.82	20	
Chlorobenzene	19	1.0	20.00	0	94.2	70	130	4.37	20	
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130	6.50	20	
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130	4.87	20	
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.3		10.00		93.4	70	130	0	0	
Surr: Dibromofluoromethane	9.1		10.00		91.1	70	130	0	0	
Surr: Toluene-d8	9.1		10.00		90.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54482**	RunNo: **54482**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805957** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.7	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.2	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54482**	RunNo: **54482**
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805960** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40375**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **40375**		RunNo: **54318**		
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**		SeqNo: **1798879**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**
17-Oct-18

Client: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40375**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **40375**	RunNo: **54318**	
Prep Date: **9/17/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798879**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		75.3	15	74.1			S
Surr: Phenol-d5	140		200.0		70.6	15	59.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		74.2	22.1	112			
Surr: Nitrobenzene-d5	81		100.0		81.2	33.2	94			
Surr: 2-Fluorobiphenyl	79		100.0		78.6	34	90.9			
Surr: 4-Terphenyl-d14	82		100.0		82.1	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809856**

17-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **lcs-40375**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40375**	RunNo: **54377**
Prep Date: **9/17/2018**	Analysis Date: **9/24/2018**	SeqNo: **1800241** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	71.5	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	82.0	57	115			
2-Chlorophenol	150	10	200.0	0	77.2	43.4	112			
1,4-Dichlorobenzene	70	10	100.0	0	70.0	38	95.2			
2,4-Dinitrotoluene	65	10	100.0	0	65.5	55.1	96.7			
N-Nitrosodi-n-propylamine	82	10	100.0	0	82.3	55	112			
4-Nitrophenol	120	10	200.0	0	57.9	16.6	93			
Pentachlorophenol	99	20	200.0	0	49.3	43.2	104			
Phenol	120	10	200.0	0	59.6	21.3	85.7			
Pyrene	76	10	100.0	0	75.6	64.9	105			
1,2,4-Trichlorobenzene	81	10	100.0	0	81.3	42.6	107			
Surr: 2-Fluorophenol	110		200.0		53.3	15	74.1			
Surr: Phenol-d5	100		200.0		52.4	15	59.8			
Surr: 2,4,6-Tribromophenol	120		200.0		57.6	22.1	112			
Surr: Nitrobenzene-d5	65		100.0		65.0	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		61.6	34	90.9			
Surr: 4-Terphenyl-d14	69		100.0		68.6	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ANDEAVOR** Work Order Number: **1809856** RcptNo: **1**

Received By: **Jazzmine Burkhead** **9/14/2018 8:55:00 AM**

Completed By: **Ashley Gallegos** **9/14/2018 11:22:24 AM**

Reviewed By: ENM 9/14/18 labeled by: TO 09/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2, 1 (<2 or >12 unless noted)

Adjusted? NO

Checked by: TO 9/14/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1 - 4.8 #2 - 5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
3/13/18	0855	H_2O	BW-1C	40ml VOA-5	HCl	-001			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/13/18	0700		Kayla Burkhead	03/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1-4.8 #2-5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/12/18	0925	H_2O	FB-15	40ml VOA-5	HCl	-002			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Tonyne Burkhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1 - 4.8 #2 - 5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/12/18	1040	H_2O	BW-2A	40ml VOA-5	HCl	-003			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Brynne Buckhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Courier		

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1 - 4.8 #2 - 5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	**TPH 8015B (GRO/DRO/MRO)**	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	**8260B**	8270 (Semi-VOA)	**WQCC Metals(Total & Dissolved)**	**Major Cations/Anions***			Air Bubbles (Y or N)
9/12/18	1242	H_2O	BW-2B	40ml VOA-5	HCl	-004			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Brian Buckhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1- 4.8 #2- 5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/12/18	1400	H_2O	BW-3B	40ml VOA-5	HCl	-005			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Jessie Burkhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1-4.8 #2-5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809856	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/12/18	1550	H_2O	SMW-4	40ml VOA-5	HCl	-0016			X							X						
				1 Liter Amber -	Neat												X					
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
				500 ml Plastic-1	NAOH															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Lorraine Buckhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Courier

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: Cooler #1 - 4.8 #2-5.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809851	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/12/18	----	H_2O	DUP16	40ml VOA-5	HCl	-007			X							X						
				250 ml Amber-1	Neat				X													
				250 ml Plastic-1	HNO_3													X				
				125 ml Plastic-1	HNO_3													X	X			
				125 ml Plastic-1	H_2SO_4														X			
				125 ml Plastic-1	Neat														X			
9/12/18	—	H_2O	TRIP BLANK	40 ML VOA-3	HCl	-008										X						

Date	Time	Relinquished by:	Received by:	Date	Time
9/13/18	0700		Virginia Burkhead	09/14/18	08:55
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

Courier

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:29	WG1168671

Method Blank (MB)

(MB) R3344390-1 09/24/18 08:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1027212-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1027212-01 09/24/18 08:38 • (DUP) R3344390-9 09/24/18 08:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.00323	1	200	J P1	20

L1026830-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1026830-02 09/24/18 08:17 • (DUP) R3344390-10 09/24/18 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00237	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344390-2 09/24/18 08:11 • (LCSD) R3344390-3 09/24/18 08:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.104	101	104	85.0-115			2.93	20

L1027138-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-01 09/24/18 08:23 • (MS) R3344390-5 09/24/18 08:24 • (MSD) R3344390-11 09/24/18 08:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0707	0.0644	70.7	64.4	1	75.0-125	J6	J6	9.33	20

L1027138-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-04 09/24/18 08:35 • (MS) R3344390-7 09/24/18 08:36 • (MSD) R3344390-8 09/24/18 08:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0933	0.104	93.3	104	1	75.0-125			10.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: 3rd Quarter 2018 Pond Sampling OrderNo.: 1809878

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 10 sample(s) on 9/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1809878**
Date Reported: **10/4/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Andeavor Gallup	**Client Sample ID:**	EP-2
Project:	3rd Quarter 2018 Pond Sampling	**Collection Date:**	9/14/2018 7:09:00 AM
Lab ID:	1809878-001A	**Matrix:**	Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	12997	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-2
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:09:00 AM
Lab ID: 1809878-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	180	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:23:00 AM
Lab ID: 1809878-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	1354	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-3
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:23:00 AM
Lab ID: 1809878-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	120	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:25:00 AM
Lab ID: 1809878-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	71	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-4
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:25:00 AM
Lab ID: 1809878-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	85	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:47:00 AM
Lab ID: 1809878-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-5
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 7:47:00 AM
Lab ID: 1809878-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	23	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:00:00 AM
Lab ID: 1809878-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-6
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:00:00 AM
Lab ID: 1809878-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	14	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:16:00 AM
Lab ID: 1809878-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	<10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-7
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:16:00 AM
Lab ID: 1809878-006B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	46	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:28:00 AM
Lab ID: 1809878-007A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	<10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-8
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:28:00 AM
Lab ID: 1809878-007B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	17	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:42:00 AM
Lab ID: 1809878-008A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	<10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-9
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 8:42:00 AM
Lab ID: 1809878-008B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	30	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 9:00:00 AM
Lab ID: 1809878-009A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	<10	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-11
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 9:00:00 AM
Lab ID: 1809878-009B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	>199.62	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 9:30:00 AM
Lab ID: 1809878-010A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **LSB**	
E. Coli	120	10.00	10.00		MPN/100	10	9/15/2018 4:31:00 PM	40357

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: EP-12B
Project: 3rd Quarter 2018 Pond Sampling
Collection Date: 9/14/2018 9:30:00 AM
Lab ID: 1809878-010B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	<35.20	2.0	2.0		mg/L	1	9/19/2018 3:08:00 PM	40358

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	373		10.0	1	09/19/2018 14:42	WG1168053

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	340		10.0	1	09/19/2018 14:42	WG1116253

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	324		10.0	1	09/19/2018 14:42	WG1162553

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	328		10.0	1	09/19/2018 14:44	WG1166555

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	549		10.0	1	09/19/2018 16:46	WG1167391

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	4690		1000	100	09/19/2018 16:47	WG1167991

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2310		1000	100	09/19/2018 16:47	WR[illegible]

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	7160		1000	100	09/19/2018 16:47	WG77 (S)

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
	mg/l		mg/l			
COD	14200		1000	100	09/19/2018 16:47	WG1172191

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	598		10.0	1	09/19/2018 16:47	WG1081151

WG1167991

Wet Chemistry by Method 410.4

QUALITY CONTROL SUMMARY

L1026698-05,06,07,08,09,10

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3343302-1 09/19/18 16:38

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1023302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1023302-01 09/19/18 16:41 • (DUP) R3343302-4 09/19/18 16:41

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	16.4	15.9	1	3.58		20

L1026698-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1026698-10 09/19/18 16:47 • (DUP) R3343302-7 09/19/18 16:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	599	599	1	0.0985		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3343302-2 09/19/18 16:38 • (LCSD) R3343302-3 09/19/18 16:39

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	220	220	90.8	90.9	90.0-110			0.127	20

L1026643-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026643-01 09/19/18 16:43 • (MS) R3343302-5 09/19/18 16:43 • (MSD) R3343302-6 09/19/18 16:44

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	21.3	445	443	105	105	1	80.0-120			0.354	20

WG1168058

Wet Chemistry by Method 410.4

QUALITY CONTROL SUMMARY

L1026698-01,02,03,04

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3343216-1 09/19/18 14:34

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1025622-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1025622-06 09/19/18 14:37 • (DUP) R3343216-4 09/19/18 14:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	50.2	44.0	1	13.1		20

L1026698-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1026698-04 09/19/18 14:44 • (DUP) R3343216-7 09/19/18 14:44

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	928	920	1	0.819		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3343216-2 09/19/18 14:35 • (LCSD) R3343216-3 09/19/18 14:35

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	252	240	104	99.2	90.0-110			4.53	20

L1025866-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026668-01 09/19/18 14:42 • (MS) R3343216-5 09/19/18 14:42 • (MSD) R3343216-6 09/19/18 14:42

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	33.2	708	703	169	167	1	80.0-120	J6	J6	0.693	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Tr
Ss
Cn
Sr
Qc
Gl
Sc

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809878**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Pond Sampling

Sample ID	**MB-40358**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**40358**	RunNo:	**54279**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1796005**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**MB--40358**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**40358**	RunNo:	**54279**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1796006**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-40358**	SampType:	**LCS**	TestCode:	**SM5210B: BOD**					
Client ID:	**LCSW**	Batch ID:	**40358**	RunNo:	**54279**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1796007**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	140	2.0	198.0	0	68.5	84.6	115.4			S

Sample ID	**1809878-001BDUP**	SampType:	**DUP**	TestCode:	**SM5210B: BOD**					
Client ID:	**EP-2**	Batch ID:	**40358**	RunNo:	**54279**					
Prep Date:	**9/14/2018**	Analysis Date:	**9/19/2018**	SeqNo:	**1796009**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0						3.86	35.5	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809878**

04-Oct-18

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Pond Sampling

Sample ID	**MB-40357**	SampType:	**MBLK**	TestCode:	**SM 9223B Fecal Indicator: E. coli MPN**				
Client ID:	**PBW**	Batch ID:	**40357**	RunNo:	**54170**				
Prep Date:	**9/14/2018**	Analysis Date:	**9/15/2018**	SeqNo:	**1790903**	Units:	**MPN/100mL**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR | Work Order Number: 1809878 | RcptNo: 1

Received By: Anne Thorne 9/14/2018 1:10:00 PM

Completed By: Anne Thorne 9/14/2018 1:44:28 PM

Reviewed By: IO 09/14/18

Labeled by: ENM 9/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 10 (<2 or >12 unless noted)

Adjusted? NO

Checked by: ENM 9/14/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 9/14/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			
2	1.1	Good	Yes			
3	1.0	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1809878 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 809878	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
9/14/18	0709	H_2O	EP-2	1 Liter Plastic-1	Neat	001												X				
				500 ml Plastic-1	H_2SO_4	001													X			
				100 ml Plastic-1	Neat	001														X		
	0723		EP-3	1 Liter Plastic-1	Neat	002												X				
				500 ml Plastic-1	H_2SO_4	002													X			
				100 ml Plastic-1	Neat	002														X		
	0735		EP-4	1 Liter Plastic-1	Neat	003												X				
				500 ml Plastic-1	H_2SO_4	003													X			
				100 ml Plastic-1	Neat	003														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Cooler #1 2.3-CF-1.0=1.3

Cooler #2 2.1-CF-1.0=1.1

Cooler #3 2.0-CF-1.0=1.0

Cooler #4 2.0-CF-1.0=1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: **See below**

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 180988	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
9/14/18	0747	H_2O	EP-5	1 Liter Plastic-1	Neat	204												X				
				500 ml Plastic-1	H_2SO_4	204													X			
				100 ml Plastic-1	Neat	204														X		
	0800		EP-6	1 Liter Plastic-1	Neat	205												X				
				500 ml Plastic-1	H_2SO_4	205													X			
				100 ml Plastic-1	Neat	205														X		
	0816		EP-7	1 Liter Plastic-1	Neat	206												X				
				500 ml Plastic-1	H_2SO_4	206													X			
				100 ml Plastic-1	Neat	206														X		

Date: 9/14/18 Time: 1310 Relinquished by: _____ Received by: _____ Date: 09/14/18 Time: 1310

Date: _____ Time: _____ Relinquished by: _____ Received by: _____ Date: _____ Time: _____

Remarks:

Cooler #1 2.3 - CF-1.0 = 1.3

Cooler #2 2.1 - CF-1.0 = 1.1

Cooler #3 2.0 - CF-1.0 = ~~2.0~~ 1.0 AT 09/14/18

Cooler #4 2.0 - CF-1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: **X** Yes ☐ No

Sample Temperature: See Below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809878	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
9/14/18	0828	H_2O	EP-8	1 Liter Plastic-1	Neat	207												X				
				500 ml Plastic-1	H_2SO_4	207													X			
				100 ml Plastic-1	Neat	207														X		
	0842		EP-9	1 Liter Plastic-1	Neat	208												X				
				500 ml Plastic-1	H_2SO_4	208													X			
				100 ml Plastic-1	Neat	208														X		
	0900		EP-11	1 Liter Plastic-1	Neat	209												X				
				500 ml Plastic-1	H_2SO_4	209													X			
				100 ml Plastic-1	Neat	209														X		

Date	Time	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Cooler #1 2.3 - CF 1.0 = 1.3

Cooler #2 2.1 - CF 1.0 = 1.1

Cooler #3 2.0 - CF 1.0 = 1.0

Cooler #4 2.0 - CF 1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **3rd Quarter 2018 Pond Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809878	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	BOD	COD	E-COLI		Air Bubbles (Y or N)
9/14/18	0930	H_2O	EP-12B	1 Liter Plastic-1	Neat	010												X				
				500 ml Plastic-1	H_2SO_4	010													X			
				100 ml Plastic-1	Neat	010														X		
			EP-	1 Liter Plastic-1	Neat													X				
				500 ml Plastic-1	H_2SO_4														X			
				100 ml Plastic-1	Neat															X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09114/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Cooler #1 2.3-CF-1.0 = 1.3

Cooler #2 2.1-CF-1.0 = 1.1

Cooler #3 2.0-CF-1.0 = 1.0

Cooler #4 2.0-CF-1.0 = 1.0

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	373		10.0	1	09/19/2018 14:42	WG1168058

1 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	340		10.0	1	09/19/2018 14:42	WG1168058

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	324		10.0	1	09/19/2018 14:42	WG1168058

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	928		10.0	1	09/19/2018 14:44	WG1168058

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	549		10.0	1	09/19/2018 16:46	WG1167391

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	4690		1000	100	09/19/2018 16:47	WG1167991

1 Tc
2 Ss
3 Cn
4 Sr
5 Qc
6 Gl
7 Al
8 Sc

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2310		1000	100	09/19/2018 16:47	WG1167991

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	2160		1000	100	09/19/2018 16:47	WG1167991

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	14200		1000	100	09/19/2018 16:47	WG1167991

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	599		10.0	1	09/19/2018 16:47	WG1167991

Method Blank (MB)

(MB) R3343302-1 09/19/18 16:38

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1023302-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1023302-01 09/19/18 16:41 • (DUP) R3343302-4 09/19/18 16:41

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	16.4	15.9	1	3.58		20

L1026698-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1026698-10 09/19/18 16:47 • (DUP) R3343302-7 09/19/18 16:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	599	599	1	0.0985		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3343302-2 09/19/18 16:38 • (LCSD) R3343302-3 09/19/18 16:39

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	220	220	90.8	90.9	90.0-110			0.127	20

L1026643-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026643-01 09/19/18 16:43 • (MS) R3343302-5 09/19/18 16:43 • (MSD) R3343302-6 09/19/18 16:44

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	21.3	445	443	106	105	1	80.0-120			0.354	20

Method Blank (MB)

(MB) R3343216-1 09/19/18 14:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1025622-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1025622-06 09/19/18 14:37 • (DUP) R3343216-4 09/19/18 14:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	50.2	44.0	1	13.1		20

L1026698-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1026698-04 09/19/18 14:44 • (DUP) R3343216-7 09/19/18 14:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	928	920	1	0.819		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3343216-2 09/19/18 14:35 • (LCSD) R3343216-3 09/19/18 14:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	252	240	104	99.3	90.0-110			4.53	20

L1026666-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026666-01 09/19/18 14:42 • (MS) R3343216-5 09/19/18 14:42 • (MSD) R3343216-6 09/19/18 14:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	33.2	708	703	169	167	1	80.0-120	J5	J5	0.696	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 15, 2018

Brain Moore

Andeavor Gallup
92 GIANT CROSSING RD
GALLUP, NM 87301
TEL:
FAX

RE: Annual 2018 Groundwater Sampling OrderNo.: 1809884

Dear Brain Moore:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1809884**
Date: **10/15/2018**

CLIENT: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Analytical Notes Regarding EPA Mehtod 8270:
All 8270 samples in this report were scanned for Quinoline by the mass spec and were not detected.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 8:25:23 PM	G54282
Surr: BFB	93.4	0	69.3-150		%Rec	1	9/20/2018 8:25:23 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 2:42:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 2:42:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 2:42:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 2:42:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 2:42:00 PM	R54246
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 2:42:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 2:42:00 PM	R54246
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 2:28:58 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.8	0	70-130		%Rec	1	9/19/2018 2:42:00 PM	R54246
Surr: 4-Bromofluorobenzene	91.4	0	70-130		%Rec	1	9/19/2018 2:42:00 PM	R54246
Surr: Dibromofluoromethane	92.3	0	70-130		%Rec	1	9/19/2018 2:42:00 PM	R54246
Surr: Toluene-d8	91.2	0	70-130		%Rec	1	9/19/2018 2:42:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/21/2018 2:43:06 PM	40451
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/21/2018 2:43:06 PM	40451
Surr: DNOP	82.7	0	76.7-135		%Rec	1	9/21/2018 2:43:06 PM	40451

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.031	0.10		mg/L	1	9/14/2018 2:44:46 PM	R54184
Chloride	ND	0.18	0.50		mg/L	1	9/14/2018 2:44:46 PM	R54184
Nitrogen, Nitrite (As N)	ND	0.048	0.10		mg/L	1	9/14/2018 2:44:46 PM	R54184
Bromide	ND	0.027	0.10		mg/L	1	9/14/2018 2:44:46 PM	R54184
Nitrogen, Nitrate (As N)	0.017	0.0066	0.10	J	mg/L	1	9/14/2018 2:44:46 PM	R54184
Phosphorus, Orthophosphate (As P)	ND	0.093	0.50		mg/L	1	9/14/2018 2:44:46 PM	R54184
Sulfate	ND	0.21	0.50		mg/L	1	9/14/2018 2:44:46 PM	R54184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	ND	0.00099	0.0020		mg/L	1	10/8/2018 5:59:54 PM	B54723
Beryllium	ND	0.00029	0.0020		mg/L	1	10/8/2018 5:59:54 PM	B54723
Cadmium	ND	0.0010	0.0020		mg/L	1	10/8/2018 5:59:54 PM	B54723
Calcium	ND	0.078	1.0		mg/L	1	10/8/2018 5:59:54 PM	B54723
Chromium	ND	0.0013	0.0060		mg/L	1	10/8/2018 5:59:54 PM	B54723
Copper	ND	0.0032	0.0060		mg/L	1	10/8/2018 5:59:54 PM	B54723
Iron	ND	0.016	0.020		mg/L	1	10/8/2018 5:59:54 PM	B54723
Magnesium	ND	0.25	1.0		mg/L	1	10/8/2018 5:59:54 PM	B54723
Manganese	0.00045	0.00039	0.0020	J	mg/L	1	10/8/2018 5:59:54 PM	B54723
Potassium	ND	0.11	1.0		mg/L	1	10/8/2018 5:59:54 PM	B54723
Silver	ND	0.0018	0.0050		mg/L	1	10/8/2018 5:59:54 PM	B54723
Sodium	ND	0.16	1.0		mg/L	1	10/8/2018 5:59:54 PM	B54723
Vanadium	ND	0.0019	0.050		mg/L	1	10/8/2018 5:59:54 PM	B54723
Zinc	0.0082	0.0021	0.010	J	mg/L	1	10/8/2018 5:59:54 PM	B54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:41:36 PM	C54404
Arsenic	ND	0.00042	0.0010		mg/L	1	9/25/2018 2:41:36 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:41:36 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:41:36 PM	C54404
Uranium	ND	0.000096	0.00050		mg/L	1	9/25/2018 2:41:36 PM	C54404

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	ND	0.0010	0.0020		mg/L	1	9/25/2018 4:28:48 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:28:48 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:28:48 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:28:48 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:28:48 PM	40438
Iron	ND	0.010	0.020		mg/L	1	9/25/2018 4:28:48 PM	40438
Manganese	ND	0.0011	0.0020		mg/L	1	9/25/2018 4:28:48 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:28:48 PM	40438
Vanadium	ND	0.00076	0.050		mg/L	1	9/25/2018 4:28:48 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:28:48 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:42:51 AM	40438
Arsenic	ND	0.00041	0.0010		mg/L	1	9/24/2018 11:42:51 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:42:51 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:42:51 AM	40438
Uranium	ND	0.000068	0.00050		mg/L	1	9/25/2018 10:04:17 AM	40438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Benzoic acid	6.8	6.3	20	J	µg/L	1	9/24/2018 10:57:50 AM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: FB 16
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 9:45:00 AM
Lab ID: 1809884-001F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 10:57:50 AM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 10:57:50 AM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 10:57:50 AM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 10:57:50 AM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 10:57:50 AM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 10:57:50 AM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 10:57:50 AM	40466
Surr: 2-Fluorophenol	39.3	0	15-74.1		%Rec	1	9/24/2018 10:57:50 AM	40466
Surr: Phenol-d5	30.9	0	15-59.8		%Rec	1	9/24/2018 10:57:50 AM	40466
Surr: 2,4,6-Tribromophenol	66.3	0	22.1-112		%Rec	1	9/24/2018 10:57:50 AM	40466
Surr: Nitrobenzene-d5	66.6	0	33.2-94		%Rec	1	9/24/2018 10:57:50 AM	40466
Surr: 2-Fluorobiphenyl	62.4	0	34-90.9		%Rec	1	9/24/2018 10:57:50 AM	40466
Surr: 4-Terphenyl-d14	85.8	0	15-149		%Rec	1	9/24/2018 10:57:50 AM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 2:59:02 PM	G54282
Surr: BFB	93.6	0	69.3-150		%Rec	1	9/20/2018 2:59:02 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 3:07:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 3:07:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 3:07:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 3:07:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 3:07:00 PM	R54246
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 3:07:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 3:07:00 PM	R54246
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 2:58:10 PM	R54482
Surr: 1,2-Dichloroethane-d4	89.4	0	70-130		%Rec	1	9/19/2018 3:07:00 PM	R54246
Surr: 4-Bromofluorobenzene	91.9	0	70-130		%Rec	1	9/19/2018 3:07:00 PM	R54246
Surr: Dibromofluoromethane	96.1	0	70-130		%Rec	1	9/19/2018 3:07:00 PM	R54246
Surr: Toluene-d8	89.5	0	70-130		%Rec	1	9/19/2018 3:07:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/20/2018 4:37:52 PM	40451
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2018 4:37:52 PM	40451
Surr: DNOP	113	0	76.7-135		%Rec	1	9/20/2018 4:37:52 PM	40451

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.42	0.16	0.50	J	mg/L	5	9/14/2018 3:36:13 PM	R54184
Chloride	16	0.91	2.5		mg/L	5	9/14/2018 3:36:13 PM	R54184
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 3:36:13 PM	R54184
Bromide	ND	0.13	0.50		mg/L	5	9/14/2018 3:36:13 PM	R54184
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/14/2018 3:36:13 PM	R54184
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 3:36:13 PM	R54184
Sulfate	150	1.0	2.5		mg/L	5	9/14/2018 3:36:13 PM	R54184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.021	0.00099	0.0020		mg/L	1	10/8/2018 6:04:21 PM	B54723
Beryllium	ND	0.00029	0.0020		mg/L	1	10/8/2018 6:04:21 PM	B54723
Cadmium	ND	0.0010	0.0020		mg/L	1	10/8/2018 6:04:21 PM	B54723
Calcium	1.9	0.078	1.0		mg/L	1	10/8/2018 6:04:21 PM	B54723
Chromium	ND	0.0013	0.0060		mg/L	1	10/8/2018 6:04:21 PM	B54723
Copper	ND	0.0032	0.0060		mg/L	1	10/8/2018 6:04:21 PM	B54723
Iron	ND	0.016	0.020		mg/L	1	10/8/2018 6:04:21 PM	B54723
Magnesium	ND	0.25	1.0		mg/L	1	10/8/2018 6:04:21 PM	B54723
Manganese	0.0064	0.00039	0.0020		mg/L	1	10/8/2018 6:04:21 PM	B54723
Potassium	0.59	0.11	1.0	J	mg/L	1	10/8/2018 6:04:21 PM	B54723
Silver	ND	0.0018	0.0050		mg/L	1	10/8/2018 6:04:21 PM	B54723
Sodium	300	1.6	10		mg/L	10	10/8/2018 6:06:21 PM	B54723
Vanadium	ND	0.0019	0.050		mg/L	1	10/8/2018 6:04:21 PM	B54723
Zinc	0.011	0.0021	0.010		mg/L	1	10/8/2018 6:04:21 PM	B54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:50:55 PM	C54404
Arsenic	0.00072	0.00042	0.0010	J	mg/L	1	9/25/2018 2:50:55 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:50:55 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:50:55 PM	C54404
Uranium	0.014	0.000096	0.00050		mg/L	1	9/25/2018 2:50:55 PM	C54404

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.020	0.0010	0.0020		mg/L	1	9/25/2018 4:30:58 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:30:58 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:30:58 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:30:58 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:30:58 PM	40438
Iron	ND	0.010	0.020		mg/L	1	9/25/2018 4:30:58 PM	40438
Manganese	0.0059	0.0011	0.0020		mg/L	1	9/25/2018 4:30:58 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:30:58 PM	40438
Vanadium	0.00091	0.00076	0.050	J	mg/L	1	9/25/2018 4:30:58 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:30:58 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:45:13 AM	40438
Arsenic	0.00076	0.00041	0.0010	J	mg/L	1	9/24/2018 11:45:13 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:45:13 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:45:13 AM	40438
Uranium	0.014	0.000068	0.00050		mg/L	1	9/25/2018 10:06:38 AM	40438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Benzoic acid	6.5	6.3	20	J	µg/L	1	9/24/2018 11:27:18 AM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-4
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 10:10:00 AM
Lab ID: 1809884-002F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 11:27:18 AM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 11:27:18 AM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 11:27:18 AM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 11:27:18 AM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 11:27:18 AM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 11:27:18 AM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 11:27:18 AM	40466
Surr: 2-Fluorophenol	25.2	0	15-74.1		%Rec	1	9/24/2018 11:27:18 AM	40466
Surr: Phenol-d5	22.0	0	15-59.8		%Rec	1	9/24/2018 11:27:18 AM	40466
Surr: 2,4,6-Tribromophenol	51.5	0	22.1-112		%Rec	1	9/24/2018 11:27:18 AM	40466
Surr: Nitrobenzene-d5	33.1	0	33.2-94	S	%Rec	1	9/24/2018 11:27:18 AM	40466
Surr: 2-Fluorobiphenyl	34.3	0	34-90.9		%Rec	1	9/24/2018 11:27:18 AM	40466
Surr: 4-Terphenyl-d14	80.6	0	15-149		%Rec	1	9/24/2018 11:27:18 AM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 8:48:35 PM	G54282
Surr: BFB	93.3	0	69.3-150		%Rec	1	9/20/2018 8:48:35 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 3:31:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 3:31:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 3:31:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 3:31:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 3:31:00 PM	R54246
Methylene Chloride	0.41	0.21	3.0	J	µg/L	1	9/19/2018 3:31:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 3:31:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 3:31:00 PM	R54246
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 3:27:28 PM	R54482
Surr: 1,2-Dichloroethane-d4	87.9	0	70-130		%Rec	1	9/19/2018 3:31:00 PM	R54246
Surr: 4-Bromofluorobenzene	90.2	0	70-130		%Rec	1	9/19/2018 3:31:00 PM	R54246
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	9/19/2018 3:31:00 PM	R54246
Surr: Toluene-d8	89.1	0	70-130		%Rec	1	9/19/2018 3:31:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/20/2018 5:02:29 PM	40451
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2018 5:02:29 PM	40451
Surr: DNOP	119	0	76.7-135		%Rec	1	9/20/2018 5:02:29 PM	40451

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.80	0.16	0.50		mg/L	5	9/14/2018 4:01:58 PM	R54184
Chloride	48	0.91	2.5		mg/L	5	9/14/2018 4:01:58 PM	R54184
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 4:01:58 PM	R54184
Bromide	ND	0.13	0.50		mg/L	5	9/14/2018 4:01:58 PM	R54184
Nitrogen, Nitrate (As N)	0.049	0.033	0.50	J	mg/L	5	9/14/2018 4:01:58 PM	R54184
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 4:01:58 PM	R54184
Sulfate	160	1.0	2.5		mg/L	5	9/14/2018 4:01:58 PM	R54184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.012	0.00099	0.0020		mg/L	1	10/8/2018 6:08:34 PM	B54723
Beryllium	ND	0.00029	0.0020		mg/L	1	10/8/2018 6:08:34 PM	B54723
Cadmium	ND	0.0010	0.0020		mg/L	1	10/8/2018 6:08:34 PM	B54723
Calcium	1.7	0.078	1.0		mg/L	1	10/8/2018 6:08:34 PM	B54723
Chromium	0.0024	0.0013	0.0060	J	mg/L	1	10/8/2018 6:08:34 PM	B54723
Copper	ND	0.0032	0.0060		mg/L	1	10/8/2018 6:08:34 PM	B54723
Iron	ND	0.016	0.020		mg/L	1	10/8/2018 6:08:34 PM	B54723
Magnesium	ND	0.25	1.0		mg/L	1	10/8/2018 6:08:34 PM	B54723
Manganese	0.0020	0.00039	0.0020	J	mg/L	1	10/8/2018 6:08:34 PM	B54723
Potassium	0.57	0.11	1.0	J	mg/L	1	10/8/2018 6:08:34 PM	B54723
Silver	ND	0.0018	0.0050		mg/L	1	10/8/2018 6:08:34 PM	B54723
Sodium	270	1.6	10		mg/L	10	10/8/2018 6:10:34 PM	B54723
Vanadium	0.0022	0.0019	0.050	J	mg/L	1	10/8/2018 6:08:34 PM	B54723
Zinc	0.0069	0.0021	0.010	J	mg/L	1	10/8/2018 6:08:34 PM	B54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:53:15 PM	C54404
Arsenic	0.0013	0.00042	0.0010		mg/L	1	9/25/2018 2:53:15 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:53:15 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:53:15 PM	C54404
Uranium	0.0095	0.000096	0.00050		mg/L	1	9/25/2018 2:53:15 PM	C54404

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.013	0.0010	0.0020		mg/L	1	9/25/2018 4:32:55 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:32:55 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:32:55 PM	40438
Chromium	0.0018	0.0018	0.0060	J	mg/L	1	9/25/2018 4:32:55 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:32:55 PM	40438
Iron	0.16	0.010	0.020		mg/L	1	9/25/2018 4:32:55 PM	40438
Manganese	0.010	0.0011	0.0020		mg/L	1	9/25/2018 4:32:55 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:32:55 PM	40438
Vanadium	0.0023	0.00076	0.050	J	mg/L	1	9/25/2018 4:32:55 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:32:55 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:47:35 AM	40438
Arsenic	0.0013	0.00041	0.0010		mg/L	1	9/24/2018 11:47:35 AM	40438
Lead	0.0013	0.00023	0.00050		mg/L	1	9/24/2018 11:47:35 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:47:35 AM	40438
Uranium	0.0094	0.000068	0.00050		mg/L	1	9/25/2018 10:08:59 AM	40438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Benzoic acid	6.6	6.3	20	J	µg/L	1	9/24/2018 12:55:52 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-1
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 1:10:00 PM
Lab ID: 1809884-003F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 12:55:52 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 12:55:52 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 12:55:52 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 12:55:52 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 12:55:52 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 12:55:52 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 12:55:52 PM	40466
Surr: 2-Fluorophenol	50.5	0	15-74.1		%Rec	1	9/24/2018 12:55:52 PM	40466
Surr: Phenol-d5	40.3	0	15-59.8		%Rec	1	9/24/2018 12:55:52 PM	40466
Surr: 2,4,6-Tribromophenol	69.6	0	22.1-112		%Rec	1	9/24/2018 12:55:52 PM	40466
Surr: Nitrobenzene-d5	76.8	0	33.2-94		%Rec	1	9/24/2018 12:55:52 PM	40466
Surr: 2-Fluorobiphenyl	69.6	0	34-90.9		%Rec	1	9/24/2018 12:55:52 PM	40466
Surr: 4-Terphenyl-d14	95.4	0	15-149		%Rec	1	9/24/2018 12:55:52 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 11:52:30 AM	G54282
Surr: BFB	94.0	0	69.3-150		%Rec	1	9/20/2018 11:52:30 AM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 3:56:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 3:56:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 3:56:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 3:56:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 3:56:00 PM	R54246
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 3:56:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 3:56:00 PM	R54246
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 3:56:57 PM	R54482
Surr: 1,2-Dichloroethane-d4	91.2	0	70-130		%Rec	1	9/19/2018 3:56:00 PM	R54246
Surr: 4-Bromofluorobenzene	89.9	0	70-130		%Rec	1	9/19/2018 3:56:00 PM	R54246
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	9/19/2018 3:56:00 PM	R54246
Surr: Toluene-d8	89.7	0	70-130		%Rec	1	9/19/2018 3:56:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/20/2018 5:26:55 PM	40451
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2018 5:26:55 PM	40451
Surr: DNOP	108	0	76.7-135		%Rec	1	9/20/2018 5:26:55 PM	40451

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.87	0.16	0.50		mg/L	5	9/14/2018 4:53:25 PM	R54184
Chloride	56	0.91	2.5		mg/L	5	9/14/2018 4:53:25 PM	R54184
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 4:53:25 PM	R54184
Bromide	0.15	0.13	0.50	J	mg/L	5	9/14/2018 4:53:25 PM	R54184
Nitrogen, Nitrate (As N)	ND	0.033	0.50		mg/L	5	9/14/2018 4:53:25 PM	R54184
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 4:53:25 PM	R54184
Sulfate	170	1.0	2.5		mg/L	5	9/14/2018 4:53:25 PM	R54184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.018	0.00099	0.0020		mg/L	1	10/8/2018 6:12:36 PM	B54723
Beryllium	ND	0.00029	0.0020		mg/L	1	10/8/2018 6:12:36 PM	B54723
Cadmium	ND	0.0010	0.0020		mg/L	1	10/8/2018 6:12:36 PM	B54723
Calcium	1.6	0.078	1.0		mg/L	1	10/8/2018 6:12:36 PM	B54723
Chromium	ND	0.0013	0.0060		mg/L	1	10/8/2018 6:12:36 PM	B54723
Copper	ND	0.0032	0.0060		mg/L	1	10/8/2018 6:12:36 PM	B54723
Iron	ND	0.016	0.020		mg/L	1	10/8/2018 6:12:36 PM	B54723
Magnesium	ND	0.25	1.0		mg/L	1	10/8/2018 6:12:36 PM	B54723
Manganese	0.0024	0.00039	0.0020		mg/L	1	10/8/2018 6:12:36 PM	B54723
Potassium	0.50	0.11	1.0	J	mg/L	1	10/8/2018 6:12:36 PM	B54723
Silver	ND	0.0018	0.0050		mg/L	1	10/8/2018 6:12:36 PM	B54723
Sodium	270	1.6	10		mg/L	10	10/8/2018 6:14:35 PM	B54723
Vanadium	ND	0.0019	0.050		mg/L	1	10/8/2018 6:12:36 PM	B54723
Zinc	0.0079	0.0021	0.010	J	mg/L	1	10/8/2018 6:12:36 PM	B54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:55:35 PM	C54404
Arsenic	0.00098	0.00042	0.0010	J	mg/L	1	9/25/2018 2:55:35 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:55:35 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:55:35 PM	C54404
Uranium	0.0080	0.000096	0.00050		mg/L	1	9/25/2018 2:55:35 PM	C54404

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.017	0.0010	0.0020		mg/L	1	9/25/2018 4:41:23 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:41:23 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:41:23 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:41:23 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:41:23 PM	40438
Iron	0.010	0.010	0.020	J	mg/L	1	9/25/2018 4:41:23 PM	40438
Manganese	0.0026	0.0011	0.0020		mg/L	1	9/25/2018 4:41:23 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:41:23 PM	40438
Vanadium	ND	0.00076	0.050		mg/L	1	9/25/2018 4:41:23 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:41:23 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:49:56 AM	40438
Arsenic	0.00099	0.00041	0.0010	J	mg/L	1	9/24/2018 11:49:56 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/24/2018 11:49:56 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:49:56 AM	40438
Uranium	0.0080	0.000068	0.00050		mg/L	1	9/25/2018 10:16:02 AM	40438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Benzoic acid	6.8	6.3	20	J	µg/L	1	9/24/2018 1:25:15 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: MW-2
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018 4:45:00 PM
Lab ID: 1809884-004F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 1:25:15 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 1:25:15 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 1:25:15 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 1:25:15 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 1:25:15 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 1:25:15 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 1:25:15 PM	40466
Surr: 2-Fluorophenol	44.4	0	15-74.1		%Rec	1	9/24/2018 1:25:15 PM	40466
Surr: Phenol-d5	34.8	0	15-59.8		%Rec	1	9/24/2018 1:25:15 PM	40466
Surr: 2,4,6-Tribromophenol	66.9	0	22.1-112		%Rec	1	9/24/2018 1:25:15 PM	40466
Surr: Nitrobenzene-d5	63.4	0	33.2-94		%Rec	1	9/24/2018 1:25:15 PM	40466
Surr: 2-Fluorobiphenyl	60.2	0	34-90.9		%Rec	1	9/24/2018 1:25:15 PM	40466
Surr: 4-Terphenyl-d14	84.4	0	15-149		%Rec	1	9/24/2018 1:25:15 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 9:11:45 PM	G54282
Surr: BFB	93.0	0	69.3-150		%Rec	1	9/20/2018 9:11:45 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 4:21:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 4:21:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 4:21:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 4:21:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 4:21:00 PM	R54246
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 4:21:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 4:21:00 PM	R54246
1,4-Dioxane	ND	4.1	10		µg/L	1	9/27/2018 4:26:13 PM	R54482
Surr: 1,2-Dichloroethane-d4	91.1	0	70-130		%Rec	1	9/19/2018 4:21:00 PM	R54246
Surr: 4-Bromofluorobenzene	90.8	0	70-130		%Rec	1	9/19/2018 4:21:00 PM	R54246
Surr: Dibromofluoromethane	98.4	0	70-130		%Rec	1	9/19/2018 4:21:00 PM	R54246
Surr: Toluene-d8	89.6	0	70-130		%Rec	1	9/19/2018 4:21:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005B
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	9/20/2018 5:51:27 PM	40451
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	9/20/2018 5:51:27 PM	40451
Surr: DNOP	110	0	76.7-135		%Rec	1	9/20/2018 5:51:27 PM	40451

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005C
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.41	0.16	0.50	J	mg/L	5	9/14/2018 5:19:08 PM	R54184
Chloride	16	0.91	2.5		mg/L	5	9/14/2018 5:19:08 PM	R54184
Nitrogen, Nitrite (As N)	ND	0.24	0.50		mg/L	5	9/14/2018 5:19:08 PM	R54184
Bromide	ND	0.13	0.50		mg/L	5	9/14/2018 5:19:08 PM	R54184
Nitrogen, Nitrate (As N)	0.053	0.033	0.50	J	mg/L	5	9/14/2018 5:19:08 PM	R54184
Phosphorus, Orthophosphate (As P)	ND	0.46	2.5		mg/L	5	9/14/2018 5:19:08 PM	R54184
Sulfate	150	1.0	2.5		mg/L	5	9/14/2018 5:19:08 PM	R54184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005D
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.021	0.00099	0.0020		mg/L	1	10/8/2018 6:16:36 PM	B54723
Beryllium	0.00032	0.00029	0.0020	J	mg/L	1	10/8/2018 6:16:36 PM	B54723
Cadmium	ND	0.0010	0.0020		mg/L	1	10/8/2018 6:16:36 PM	B54723
Calcium	1.8	0.078	1.0		mg/L	1	10/8/2018 6:16:36 PM	B54723
Chromium	ND	0.0013	0.0060		mg/L	1	10/8/2018 6:16:36 PM	B54723
Copper	ND	0.0032	0.0060		mg/L	1	10/8/2018 6:16:36 PM	B54723
Iron	ND	0.016	0.020		mg/L	1	10/8/2018 6:16:36 PM	B54723
Magnesium	ND	0.25	1.0		mg/L	1	10/8/2018 6:16:36 PM	B54723
Manganese	0.0062	0.00039	0.0020		mg/L	1	10/8/2018 6:16:36 PM	B54723
Potassium	0.61	0.11	1.0	J	mg/L	1	10/8/2018 6:16:36 PM	B54723
Silver	ND	0.0018	0.0050		mg/L	1	10/8/2018 6:16:36 PM	B54723
Sodium	290	1.6	10		mg/L	10	10/8/2018 6:18:36 PM	B54723
Vanadium	ND	0.0019	0.050		mg/L	1	10/8/2018 6:16:36 PM	B54723
Zinc	0.0075	0.0021	0.010	J	mg/L	1	10/8/2018 6:16:36 PM	B54723
EPA 200.8: DISSOLVED METALS							Analyst: **ELS**	
Antimony	ND	0.00026	0.0010		mg/L	1	9/25/2018 2:57:54 PM	C54404
Arsenic	0.00072	0.00042	0.0010	J	mg/L	1	9/25/2018 2:57:54 PM	C54404
Lead	ND	0.00017	0.00050		mg/L	1	9/25/2018 2:57:54 PM	C54404
Selenium	ND	0.00076	0.0010		mg/L	1	9/25/2018 2:57:54 PM	C54404
Uranium	0.014	0.000096	0.00050		mg/L	1	9/25/2018 2:57:54 PM	C54404

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005E
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.019	0.0010	0.0020		mg/L	1	9/25/2018 4:43:23 PM	40438
Beryllium	ND	0.00026	0.0020		mg/L	1	9/25/2018 4:43:23 PM	40438
Cadmium	ND	0.00058	0.0020		mg/L	1	9/25/2018 4:43:23 PM	40438
Chromium	ND	0.0018	0.0060		mg/L	1	9/25/2018 4:43:23 PM	40438
Copper	ND	0.0041	0.0060		mg/L	1	9/25/2018 4:43:23 PM	40438
Iron	ND	0.010	0.020		mg/L	1	9/25/2018 4:43:23 PM	40438
Manganese	0.0057	0.0011	0.0020		mg/L	1	9/25/2018 4:43:23 PM	40438
Silver	ND	0.0012	0.0050		mg/L	1	9/25/2018 4:43:23 PM	40438
Vanadium	ND	0.00076	0.050		mg/L	1	9/25/2018 4:43:23 PM	40438
Zinc	ND	0.0033	0.010		mg/L	1	9/25/2018 4:43:23 PM	40438
200.8 ICPMS METALS:TOTAL							Analyst: **ELS**	
Antimony	ND	0.00024	0.0010		mg/L	1	9/24/2018 11:57:00 AM	40438
Arsenic	0.00077	0.00041	0.0010	J	mg/L	1	9/24/2018 11:57:00 AM	40438
Lead	ND	0.00023	0.00050		mg/L	1	9/25/2018 10:18:23 AM	40438
Selenium	ND	0.00098	0.0010		mg/L	1	9/24/2018 11:57:00 AM	40438
Uranium	0.014	0.000068	0.00050		mg/L	1	9/25/2018 10:18:23 AM	40438

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Acenaphthylene	ND	6.2	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Aniline	ND	6.2	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Anthracene	ND	5.7	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Azobenzene	ND	6.7	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benz(a)anthracene	ND	5.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benzo(a)pyrene	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Benzoic acid	8.8	6.3	20	J	µg/L	1	9/24/2018 1:54:40 PM	40466
Benzyl alcohol	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Carbazole	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Chloroaniline	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Chloronaphthalene	ND	6.1	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Chlorophenol	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Chrysene	ND	6.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Dibenzofuran	ND	6.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Diethyl phthalate	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Dimethyl phthalate	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: DUP 17
Project: Annual 2018 Groundwater Sampling
Collection Date: 9/13/2018
Lab ID: 1809884-005F
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Fluoranthene	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Fluorene	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Hexachlorobenzene	ND	6.2	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Hexachlorobutadiene	ND	6.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Hexachloroethane	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Isophorone	ND	6.2	10		µg/L	1	9/24/2018 1:54:40 PM	40466
1-Methylnaphthalene	ND	7.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Methylnaphthalene	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Methylphenol	ND	6.3	10		µg/L	1	9/24/2018 1:54:40 PM	40466
3+4-Methylphenol	ND	5.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	9/24/2018 1:54:40 PM	40466
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Naphthalene	ND	5.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Nitroaniline	ND	5.9	10		µg/L	1	9/24/2018 1:54:40 PM	40466
3-Nitroaniline	ND	6.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Nitroaniline	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Nitrobenzene	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2-Nitrophenol	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
4-Nitrophenol	ND	5.6	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Pentachlorophenol	ND	5.3	20		µg/L	1	9/24/2018 1:54:40 PM	40466
Phenanthrene	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Phenol	ND	6.0	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Pyrene	ND	6.5	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Pyridine	ND	5.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	9/24/2018 1:54:40 PM	40466
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	9/24/2018 1:54:40 PM	40466
Surr: 2-Fluorophenol	45.0	0	15-74.1		%Rec	1	9/24/2018 1:54:40 PM	40466
Surr: Phenol-d5	33.5	0	15-59.8		%Rec	1	9/24/2018 1:54:40 PM	40466
Surr: 2,4,6-Tribromophenol	67.9	0	22.1-112		%Rec	1	9/24/2018 1:54:40 PM	40466
Surr: Nitrobenzene-d5	57.3	0	33.2-94		%Rec	1	9/24/2018 1:54:40 PM	40466
Surr: 2-Fluorobiphenyl	58.9	0	34-90.9		%Rec	1	9/24/2018 1:54:40 PM	40466
Surr: 4-Terphenyl-d14	89.9	0	15-149		%Rec	1	9/24/2018 1:54:40 PM	40466

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809884-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	9/20/2018 9:35:08 PM	G54282
Surr: BFB	93.8	0	69.3-150		%Rec	1	9/20/2018 9:35:08 PM	G54282
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Toluene	ND	0.17	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Ethylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Methyl tert-butyl ether (MTBE)	ND	0.32	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Naphthalene	ND	0.29	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
2-Methylnaphthalene	ND	0.24	4.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Acetone	ND	0.79	10		µg/L	1	9/19/2018 4:46:00 PM	R54246
Bromobenzene	ND	0.32	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Bromodichloromethane	ND	0.28	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Bromoform	ND	0.32	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Bromomethane	ND	0.26	3.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
2-Butanone	ND	1.3	10		µg/L	1	9/19/2018 4:46:00 PM	R54246
Carbon disulfide	ND	0.39	10		µg/L	1	9/19/2018 4:46:00 PM	R54246
Carbon Tetrachloride	ND	0.13	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Chlorobenzene	ND	0.29	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Chloroethane	ND	0.16	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Chloroform	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Chloromethane	ND	0.29	3.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Dibromochloromethane	ND	0.24	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Dibromomethane	ND	0.32	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2-Dichloropropane	ND	0.15	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Andeavor Gallup
Client Sample ID: Trip Blank
Project: Annual 2018 Groundwater Sampling
Collection Date:
Lab ID: 1809884-006A
Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
2,2-Dichloropropane	ND	0.18	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
2-Hexanone	ND	0.91	10		µg/L	1	9/19/2018 4:46:00 PM	R54246
Isopropylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	9/19/2018 4:46:00 PM	R54246
Methylene Chloride	ND	0.21	3.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
n-Propylbenzene	ND	0.24	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Styrene	ND	0.25	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1,1-Trichloroethane	ND	0.15	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Trichlorofluoromethane	ND	0.17	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Vinyl chloride	ND	0.11	1.0		µg/L	1	9/19/2018 4:46:00 PM	R54246
Xylenes, Total	ND	0.64	1.5		µg/L	1	9/19/2018 4:46:00 PM	R54246
Surr: 1,2-Dichloroethane-d4	89.0	0	70-130		%Rec	1	9/19/2018 4:46:00 PM	R54246
Surr: 4-Bromofluorobenzene	90.8	0	70-130		%Rec	1	9/19/2018 4:46:00 PM	R54246
Surr: Dibromofluoromethane	98.3	0	70-130		%Rec	1	9/19/2018 4:46:00 PM	R54246
Surr: Toluene-d8	89.9	0	70-130		%Rec	1	9/19/2018 4:46:00 PM	R54246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J6	0.00500	1	09/24/2018 08:23	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:26	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:27	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:35	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:28	WG1168671

Method Blank (MB)

(MB) R3344390-1 09/24/18 08:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1027212-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1027212-01 09/24/18 08:38 • (DUP) R3344390-9 09/24/18 08:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.00323	1	200	J P1	20

L1026830-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1026830-02 09/24/18 08:17 • (DUP) R3344390-10 09/24/18 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00237	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344390-2 09/24/18 08:11 • (LCSD) R3344390-3 09/24/18 08:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.104	101	104	85.0-115			2.93	20

L1027138-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-01 09/24/18 08:23 • (MS) R3344390-5 09/24/18 08:24 • (MSD) R3344390-11 09/24/18 08:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0707	0.0644	70.7	64.4	1	75.0-125	J6	J6	9.33	20

L1027138-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-04 09/24/18 08:35 • (MS) R3344390-7 09/24/18 08:36 • (MSD) R3344390-8 09/24/18 08:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0933	0.104	93.3	104	1	75.0-125			10.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816887** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816888** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	109	50	150			
Beryllium	0.0021	0.0020	0.002000	0	105	50	150			
Cadmium	0.0022	0.0020	0.002000	0	111	50	150			
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.5	50	150			J
Copper	0.0051	0.0060	0.006000	0	85.2	50	150			J
Iron	0.020	0.020	0.02000	0	99.1	50	150			J
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Manganese	0.0022	0.0020	0.002000	0	108	50	150			
Potassium	0.42	1.0	0.5000	0	83.1	50	150			J
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Sodium	0.52	1.0	0.5000	0	104	50	150			J
Vanadium	0.010	0.050	0.01000	0	101	50	150			J
Zinc	0.0058	0.010	0.005000	0	116	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B54723**	RunNo: **54723**
Prep Date:	Analysis Date: **10/8/2018**	SeqNo: **1816889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.1	85	115			
Beryllium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.1	85	115			
Calcium	49	1.0	50.00	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	95.4	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Magnesium	49	1.0	50.00	0	98.3	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Potassium	49	1.0	50.00	0	97.1	85	115			
Silver	0.091	0.0050	0.1000	0	90.5	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Vanadium	0.50	0.050	0.5000	0	101	85	115			
Zinc	0.47	0.010	0.5000	0	93.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40438**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Beryllium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID	**LCS-40438**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.4	85	115			
Beryllium	0.53	0.0020	0.5000	0	106	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.49	0.0020	0.5000	0	98.3	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Vanadium	0.51	0.050	0.5000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	99.9	85	115			

Sample ID	**LLLCS-40438**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802865** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0018	0.0020	0.002000	0	88.5	50	150			J
Beryllium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Cadmium	0.0016	0.0020	0.002000	0	77.5	50	150			J
Chromium	0.0058	0.0060	0.006000	0	96.8	50	150			J
Copper	0.0071	0.0060	0.006000	0	118	50	150			
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0047	0.0050	0.005000	0	94.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**LLLCS-40438**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54392**
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1802865** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vanadium	0.010	0.050	0.01000	0	104	50	150			J
Zinc	0.0062	0.010	0.005000	0	123	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801654** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-C**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801655** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00092	0.0010	0.001000	0	92.5	50	150			J
Arsenic	0.00094	0.0010	0.001000	0	93.6	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.9	50	150			J
Selenium	0.00094	0.0010	0.001000	0	93.8	50	150			J
Uranium	0.00047	0.00050	0.0005000	0	94.8	50	150			J

Sample ID **MSLCS-C**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.8	85	115			
Arsenic	0.023	0.0010	0.02500	0	92.2	85	115			
Lead	0.012	0.00050	0.01250	0	93.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.8	85	115			
Uranium	0.012	0.00050	0.01250	0	92.7	85	115			

Sample ID **1809884-001DLLMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **FB 16**	Batch ID: **C54404**	RunNo: **54404**
Prep Date:	Analysis Date: **9/25/2018**	SeqNo: **1801698** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.023	0.0010	0.02500	0	93.2	70	130			
Arsenic	0.023	0.0010	0.02500	0	92.9	70	130			
Lead	0.012	0.00050	0.01250	0	92.6	70	130			
Selenium	0.024	0.0010	0.02500	0	94.0	70	130			
Uranium	0.012	0.00050	0.01250	0	93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MB-40438**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799696**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-40438**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799697**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00094	0.0010	0.001000	0	93.8	50	150			J
Arsenic	0.0010	0.0010	0.001000	0	100	50	150			
Lead	0.00048	0.00050	0.0005000	0	96.7	50	150			J
Selenium	0.00089	0.0010	0.001000	0	89.3	50	150			J

Sample ID	**MSLCS-40438**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40438**	RunNo:	**54361**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/24/2018**	SeqNo:	**1799698**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.026	0.0010	0.02500	0	105	85	115			
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			

Sample ID	**MB-40438**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**40438**	RunNo:	**54383**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1801124**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-40438**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**40438**	RunNo:	**54383**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1801125**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00048	0.00050	0.0005000	0	95.1	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID	**MSLCS-40438**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**40438**	RunNo:	**54383**					
Prep Date:	**9/19/2018**	Analysis Date:	**9/25/2018**	SeqNo:	**1801126**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	95.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R54184**	RunNo: **54184**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791618** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **1809884-001CMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB 16**	Batch ID: **R54184**	RunNo: **54184**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.4	66.7	127			
Chloride	4.8	0.50	5.000	0	96.6	77.5	116			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	98.0	82.4	108			
Bromide	2.5	0.10	2.500	0	98.4	80.2	111			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0.01716	102	79.1	116			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.6	80.7	113			
Sulfate	9.5	0.50	10.00	0	95.3	74.9	123			

Sample ID **1809884-001CMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **FB 16**	Batch ID: **R54184**	RunNo: **54184**
Prep Date:	Analysis Date: **9/14/2018**	SeqNo: **1791622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	66.7	127	2.16	20	
Chloride	4.9	0.50	5.000	0	97.9	77.5	116	1.33	20	
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.2	82.4	108	1.24	20	
Bromide	2.5	0.10	2.500	0	100	80.2	111	1.84	20	
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0.01716	103	79.1	116	1.49	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.1	80.7	113	1.58	20	
Sulfate	9.6	0.50	10.00	0	96.5	74.9	123	1.24	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **1809884-001BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB 16**	Batch ID: **40451**	RunNo: **54274**
Prep Date: **9/19/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797255** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	82.8	143			
Surr: DNOP	0.55		0.5000		109	76.7	135			

Sample ID **1809884-001BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **FB 16**	Batch ID: **40451**	RunNo: **54274**
Prep Date: **9/19/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797256** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.8	1.0	5.000	0	116	82.8	143	3.70	20	
Surr: DNOP	0.55		0.5000		109	76.7	135	0	0	

Sample ID **LCS-40451**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **40451**	RunNo: **54274**
Prep Date: **9/19/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	70	130			
Surr: DNOP	0.57		0.5000		113	76.7	135			

Sample ID **MB-40451**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **40451**	RunNo: **54274**
Prep Date: **9/19/2018**	Analysis Date: **9/20/2018**	SeqNo: **1797268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		111	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		95.8	69.3	150			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	79.5	127			
Surr: BFB	22		20.00		112	69.3	150			

Sample ID **1809884-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MW-4**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.60	0.050	0.5000	0	120	52.5	149			
Surr: BFB	22		20.00		111	69.3	150			

Sample ID **1809884-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MW-4**	Batch ID: **G54282**	RunNo: **54282**
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1796730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.60	0.050	0.5000	0	120	52.5	149	0.133	20	
Surr: BFB	22		20.00		110	69.3	150	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795694** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	99.2	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.5	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.6	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.6	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	9.0		10.00		90.4	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795950** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795950** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795950** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.0	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID **1809884-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB 16**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795961** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	60.5	137			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.4	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.5	70	130			
Surr: Toluene-d8	9.0		10.00		89.8	70	130			

Sample ID **1809884-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB 16**	Batch ID: **R54246**	RunNo: **54246**
Prep Date:	Analysis Date: **9/19/2018**	SeqNo: **1795962** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.1	60.5	137	4.47	20	
Toluene	19	1.0	20.00	0	92.9	70	130	7.63	20	
Chlorobenzene	20	1.0	20.00	0	98.4	70	130	6.34	20	
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130	5.63	20	
Trichloroethene (TCE)	19	1.0	20.00	0	94.4	70	130	5.57	20	
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.3		10.00		93.3	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		95.5	70	130	0	0	
Surr: Toluene-d8	8.9		10.00		89.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **B54246**	RunNo: **54246**						
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1795978**	Units: **%Rec**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.0	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.4	70	130			

Sample ID **rb4**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **B54246**	RunNo: **54246**						
Prep Date:	Analysis Date: **9/20/2018**	SeqNo: **1795979**	Units: **%Rec**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.8	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.0	70	130			
Surr: Toluene-d8	9.2		10.00		91.5	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **R54482**	RunNo: **54482**						
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805957**	Units: **%Rec**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.7	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.8	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.2	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **R54482**	RunNo: **54482**						
Prep Date:	Analysis Date: **9/27/2018**	SeqNo: **1805960**	Units: **%Rec**					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**
15-Oct-18

Client: Andeavor Gallup
Project: Annual 2018 Groundwater Sampling

Sample ID **lcs-40466**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798877** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	72	10	100.0	0	72.3	55.1	104			
4-Chloro-3-methylphenol	170	10	200.0	0	85.2	57	115			
2-Chlorophenol	140	10	200.0	0	71.6	43.4	112			
1,4-Dichlorobenzene	68	10	100.0	0	68.5	38	95.2			
2,4-Dinitrotoluene	66	10	100.0	0	65.6	55.1	96.7			
N-Nitrosodi-n-propylamine	84	10	100.0	0	83.5	55	112			
4-Nitrophenol	100	10	200.0	0	50.9	16.6	93			
Pentachlorophenol	100	20	200.0	0	52.4	43.2	104			
Phenol	120	10	200.0	0	57.6	21.3	85.7			
Pyrene	79	10	100.0	0	78.7	64.9	105			
1,2,4-Trichlorobenzene	77	10	100.0	0	76.9	42.6	107			
Surr: 2-Fluorophenol	120		200.0		59.2	15	74.1			
Surr: Phenol-d5	130		200.0		63.1	15	59.8			S
Surr: 2,4,6-Tribromophenol	140		200.0		68.1	22.1	112			
Surr: Nitrobenzene-d5	70		100.0		70.0	33.2	94			
Surr: 2-Fluorobiphenyl	70		100.0		69.5	34	90.9			
Surr: 4-Terphenyl-d14	85		100.0		85.5	15	149			

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	6.4	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **mb-40466**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **40466**	RunNo: **54318**
Prep Date: **9/20/2018**	Analysis Date: **9/21/2018**	SeqNo: **1798880** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	66		200.0		32.8	15	74.1			
Surr: Phenol-d5	89		200.0		44.5	15	59.8			
Surr: 2,4,6-Tribromophenol	75		200.0		37.6	22.1	112			
Surr: Nitrobenzene-d5	68		100.0		68.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	34	90.9			
Surr: 4-Terphenyl-d14	86		100.0		85.6	15	149			

Sample ID **1809884-002fms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-4**	Batch ID: **40466**	RunNo: **54377**
Prep Date: **9/20/2018**	Analysis Date: **9/24/2018**	SeqNo: **1800232** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	48	10	100.0	0	47.6	15	123			
4-Chloro-3-methylphenol	110	10	200.0	0	54.8	26.6	118			
2-Chlorophenol	71	10	200.0	0	35.6	15	120			
1,4-Dichlorobenzene	32	10	100.0	0	31.9	19	108			
2,4-Dinitrotoluene	64	10	100.0	0	64.0	27.8	103			
N-Nitrosodi-n-propylamine	51	10	100.0	0	50.6	32.3	126			
4-Nitrophenol	89	10	200.0	0	44.4	15	72.1			
Pentachlorophenol	140	20	200.0	0	71.0	15	114			
Phenol	42	10	200.0	0	21.0	15	67.5			
Pyrene	85	10	100.0	0	85.4	31.2	112			
1,2,4-Trichlorobenzene	38	10	100.0	0	38.4	22.1	123			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809884**

15-Oct-18

Client: Andeavor Gallup

Project: Annual 2018 Groundwater Sampling

Sample ID **1809884-002fms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-4**	Batch ID: **40466**	RunNo: **54377**
Prep Date: **9/20/2018**	Analysis Date: **9/24/2018**	SeqNo: **1800232** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	51		200.0		25.4	15	74.1			
Surr: Phenol-d5	44		200.0		21.9	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		67.2	22.1	112			
Surr: Nitrobenzene-d5	38		100.0		37.5	33.2	94			
Surr: 2-Fluorobiphenyl	42		100.0		41.9	34	90.9			
Surr: 4-Terphenyl-d14	91		100.0		91.2	15	149			

Sample ID **1809884-002fmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-4**	Batch ID: **40466**	RunNo: **54377**
Prep Date: **9/20/2018**	Analysis Date: **9/24/2018**	SeqNo: **1800233** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	67.6	15	123	34.8	30.5	R
4-Chloro-3-methylphenol	140	10	200.0	0	71.3	26.6	118	26.2	50	
2-Chlorophenol	120	10	200.0	0	58.6	15	120	48.8	36.3	R
1,4-Dichlorobenzene	55	10	100.0	0	54.6	19	108	52.4	42.1	R
2,4-Dinitrotoluene	60	10	100.0	0	60.1	27.8	103	6.19	28.5	
N-Nitrosodi-n-propylamine	72	10	100.0	0	72.0	32.3	126	34.9	25.4	R
4-Nitrophenol	69	10	200.0	0	34.6	15	72.1	24.6	50	
Pentachlorophenol	95	20	200.0	0	47.6	15	114	39.5	50	
Phenol	68	10	200.0	0	34.1	15	67.5	47.3	46.1	R
Pyrene	77	10	100.0	0	77.3	31.2	112	9.88	34.3	
1,2,4-Trichlorobenzene	65	10	100.0	0	65.4	22.1	123	51.9	43.6	R
Surr: 2-Fluorophenol	85		200.0		42.4	15	74.1	0	0	
Surr: Phenol-d5	74		200.0		37.2	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		67.2	22.1	112	0	0	
Surr: Nitrobenzene-d5	64		100.0		63.5	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		64.6	34	90.9	0	0	
Surr: 4-Terphenyl-d14	82		100.0		81.9	15	149	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1809884 RcptNo: 1

Received By: **Anne Thorne** 9/14/2018 1:10:00 PM Anne Thorne

Completed By: **Anne Thorne** 9/14/2018 2:03:47 PM Anne Thorne

Reviewed By: JAB 09/18/18

Labeled by:

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 15 5 (<2 or >12 unless noted)
Adjusted? —
Checked by: AT 09/18/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 9/14/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			
2	1.1	Good	Yes			
3	1.0	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: ANDEAVOR Work Order Number: 1809884 RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	1.0	Good	Yes			

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☑ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/13/18	0945	H_2O	FB16	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber -1	Neat	001											X						
				250 ml Amber-1	Neat	001			X														
				250 ml Plastic-1	HNO_3	001												X					
				125 ml Plastic-1	HNO_3	001												X	X				
				125 ml Plastic-1	H_2SO_4	001													X				
				125 ml Plastic-1	Neat	001													X				
				500 ml Plastic-1	NAOH	001														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE

cooler #1 2.3-CF-1.0 = 1.3

cooler #2 2.1-CF-1.0 = 1.1

cooler #3 2.0-CF-1.0 = 1.0

cooler #4 2.0-CF-1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard ☒ Level 4 (Full Validation)

☐ Other _____

☒ EDD (Type) **EXCEL**

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/13/18	1010	H_2O	MW-4	40ml VOA-5	HCl	-002			X							X						
				1 Liter Amber -2	Neat	-002											X						
				250 ml Amber-1	Neat	-002			X														
				250 ml Plastic-1	HNO_3	-002												X					
				125 ml Plastic-1	HNO_3	-002												X	X				
				125 ml Plastic-1	H_2SO_4	-002													X				
				125 ml Plastic-1	Neat	-002													X				
				500 ml Plastic-1	NAOH	-002														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1510			09/14/18	810
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 2.3 -CF-1.0= 1.3

Cooler #2 2.1-CF-1.0= 1.1

Cooler #3 2.0 -CF-1.0 = 1.0

Cooler #4 2.0-CF-1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/13/18	1310	H_2O	MW-1	40ml VOA-5	HCl	003			X							X						
				1 Liter Amber -1	Neat	003											X					
				250 ml Amber-1	Neat	003			X													
				250 ml Plastic-1	HNO_3	003												X				
				125 ml Plastic-1	HNO_3	003												X	X			
				125 ml Plastic-1	H_2SO_4	003													X			
				125 ml Plastic-1	Neat	003													X			
				500 ml Plastic-1	NAOH	003														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 2.3-CF-1.0= 1.3

Cooler #2 2.1-CF-1.0= 1.1

Cooler #3 2.0-CF-1.0= 1.0

Cooler #4 2.0-CF-1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/13/18	1645	H_2O	MW-2	40ml VOA-5	HCl	001			X							X						
				1 Liter Amber - 1	Neat	002											X						
				250 ml Amber-1	Neat	003			X														
				250 ml Plastic-1	HNO_3	004												X					
				125 ml Plastic-1	HNO_3	005												X	X				
				125 ml Plastic-1	H_2SO_4	006													X				
				125 ml Plastic-1	Neat	007													X				
				500 ml Plastic-1	NAOH	008														X			

Date	Time	Relinquished by:	Received by:	Date	Time
9/13/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 2.3 - CF - 1.0 = 1.0

Cooler #2 2.1 - CF - 1.0 = 1.1

Cooler #3 2.0 - CF - 1.0 = 1.0

Cooler #4 [illegible]

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual 2018 Groundwater Sampling**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See Below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*	CYANIDE		Air Bubbles (Y or N)
9/13/18	—	H_2O	DUP 17	40ml VOA-5	HCl	005			X							X						
				1 Liter Amber -1	Neat	005											X					
				250 ml Amber-1	Neat	005			X													
				250 ml Plastic-1	HNO_3	005												X				
				125 ml Plastic-1	HNO_3	005												X	X			
				125 ml Plastic-1	H_2SO_4	005													X			
				125 ml Plastic-1	Neat	005													X			
				500 ml Plastic-1	NAOH	005														X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 2.3 - CF - 1.0 = 1.3

Cooler #2 2.1 - CF - 1.0 = 1.1

Cooler #3 2.0 - CF - 1.0 = 1.0

Cooler #4 2.0 - CF - 1.0 = 1.0

Chain-of-Custody Record

Client: **Andeavor**

Gallup Refinery

Mailing Address: **92 Giant Crossing Road**

Gallup, NM 87301

Phone #: **505-726-9745**

email or Fax#: **Brian.Moore@Andeavor.com**

QA/QC Package:

☐ Standard **X** Level 4 (Full Validation)

☐ Other _____

X EDD (Type) **EXCEL**

Turn-Around Time:

X Standard ☐ Rush _____

Project Name: **Annual Groundwater Sampling 2018**

Project #:

Project Manager: **Brian Moore**

Sampler: **Tracy Payne**

On Ice: ☒ Yes ☐ No

Sample Temperature: See below

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809884	BTEX+MTBE+TMB's(8021)	BTEX+MTBE+TPH(Gas only)	TPH 8015B (GRO/DRO/MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B	8270 (Semi-VOA)	WQCC Metals(Total & Dissolved)	Major Cations/Anions*			Air Bubbles (Y or N)
9/13/18	—	H_2O	TRIP BLANK	40 mL VOA-3	HCl	2006			X								X					

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/14/18	1310			09/14/18	1310
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: * **ANALYZE NO_2 & NO_3 FROM THE UNPRESERVED BOTTLE**

Cooler #1 2.3-CF-1.0 = 1.3

Cooler #2 2.1-CF-1.0 = 1.1

Cooler #3 2.0-CF-1.0 = 1.0

Cooler #4

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND	J6	0.00500	1	09/24/2018 08:23	WG1168671

Cp
1 Tc
2 Ss
3 Cn
4 Sr
5 Qc
6 Gl
7 Al
8 Sc

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:26	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:27	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	09/24/2018 08:35	WG1168671

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	09/24/2018 08:28	WG1168671

Method Blank (MB)

(MB) R3344390-1 09/24/18 08:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1027212-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1027212-01 09/24/18 08:38 • (DUP) R3344390-9 09/24/18 08:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.00323	1	200	J P1	20

L1026830-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1026830-02 09/24/18 08:17 • (DUP) R3344390-10 09/24/18 08:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00237	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344390-2 09/24/18 08:11 • (LCSD) R3344390-3 09/24/18 08:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.104	101	104	85.0-115			2.93	20

L1027138-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-01 09/24/18 08:23 • (MS) R3344390-5 09/24/18 08:24 • (MSD) R3344390-11 09/24/18 08:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0707	0.0644	70.7	64.4	1	75.0-125	J6	J6	9.33	20

L1027138-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027138-04 09/24/18 08:35 • (MS) R3344390-7 09/24/18 08:36 • (MSD) R3344390-8 09/24/18 08:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0933	0.104	93.3	104	1	75.0-125			10.8	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

24-Apr-19

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54111**	RunNo: **54111**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788427** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	0.34	3.0								J
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

24-Apr-19

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID: **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **W54111**	RunNo: **54111**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788427** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.23	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.7	70	130			
Surr: Toluene-d8	10		10.00		99.5	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **W54111**	RunNo: **54111**
Prep Date:	Analysis Date: **9/12/2018**	SeqNo: **1788428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.1	70	130			
Toluene	18	1.0	20.00	0	92.0	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809227**

24-Apr-19

Client: Andeavor Gallup

Project: 3rd Quarter 2018 Groundwater Sampling

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **W54111** RunNo: **54111**

Prep Date: Analysis Date: **9/12/2018** SeqNo: **1788428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	93.5	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.5	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.7	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID: **1809227-003a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-04** Batch ID: **W54111** RunNo: **54111**

Prep Date: Analysis Date: **9/12/2018** SeqNo: **1788433** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1300	10	200.0	1099	101	60.5	137			E
Toluene	200	10	200.0	13.67	91.0	70	130			
Chlorobenzene	200	10	200.0	0	102	70	130			
1,1-Dichloroethene	200	10	200.0	7.740	98.3	70	130			
Trichloroethene (TCE)	170	10	200.0	0	85.6	70	130			
Surr: 1,2-Dichloroethane-d4	99		100.0		99.0	70	130			
Surr: 4-Bromofluorobenzene	92		100.0		92.0	70	130			
Surr: Dibromofluoromethane	92		100.0		91.6	70	130			
Surr: Toluene-d8	98		100.0		97.5	70	130			

Sample ID: **1809227-003a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **MKTF-04** Batch ID: **W54111** RunNo: **54111**

Prep Date: Analysis Date: **9/12/2018** SeqNo: **1788434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1200	10	200.0	1099	74.5	60.5	137	4.09	20	E
Toluene	200	10	200.0	13.67	91.8	70	130	0.854	20	
Chlorobenzene	200	10	200.0	0	97.6	70	130	4.09	20	
1,1-Dichloroethene	190	10	200.0	7.740	90.1	70	130	8.37	20	
Trichloroethene (TCE)	170	10	200.0	0	83.2	70	130	2.84	20	
Surr: 1,2-Dichloroethane-d4	97		100.0		97.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	91		100.0		91.2	70	130	0	0	
Surr: Dibromofluoromethane	93		100.0		92.6	70	130	0	0	
Surr: Toluene-d8	100		100.0		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 08, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2018 4th QTR GW OrderNo.: 1811A37

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811A37**
Date Reported: **1/8/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 7:00:00 AM
Lab ID: 1811A37-001 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Toluene	0.18	0.17	1.0	J	µg/L	1	11/27/2018 6:16:00 PM	R55900
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Naphthalene	ND	0.29	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Acetone	ND	0.76	10		µg/L	1	11/27/2018 6:16:00 PM	R55900
Bromobenzene	ND	0.32	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Bromoform	ND	0.32	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Bromomethane	ND	0.27	3.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
2-Butanone	ND	1.4	10		µg/L	1	11/27/2018 6:16:00 PM	R55900
Carbon disulfide	ND	0.39	10		µg/L	1	11/27/2018 6:16:00 PM	R55900
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Chloroethane	ND	0.16	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Chloroform	ND	0.24	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Chloromethane	ND	0.32	3.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Dibromomethane	ND	0.32	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 7:00:00 AM
Lab ID: 1811A37-001 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
2-Hexanone	ND	0.91	10		µg/L	1	11/27/2018 6:16:00 PM	R55900
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/27/2018 6:16:00 PM	R55900
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Styrene	ND	0.25	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/27/2018 6:16:00 PM	R55900
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/27/2018 6:16:00 PM	R55900
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	1	11/27/2018 6:16:00 PM	R55900
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	11/27/2018 6:16:00 PM	R55900
Surr: Dibromofluoromethane	114	0	70-130		%Rec	1	11/27/2018 6:16:00 PM	R55900
Surr: Toluene-d8	97.3	0	70-130		%Rec	1	11/27/2018 6:16:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th QTR GW
Collection Date:
Lab ID: 1811A37-002
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Toluene	ND	0.17	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Naphthalene	ND	0.29	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Acetone	ND	0.76	10		µg/L	1	11/27/2018 6:40:00 PM	R55900
Bromobenzene	ND	0.32	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Bromoform	ND	0.32	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Bromomethane	ND	0.27	3.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
2-Butanone	ND	1.4	10		µg/L	1	11/27/2018 6:40:00 PM	R55900
Carbon disulfide	ND	0.39	10		µg/L	1	11/27/2018 6:40:00 PM	R55900
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Chloroethane	ND	0.16	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Chloroform	ND	0.24	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Chloromethane	ND	0.32	3.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Dibromomethane	ND	0.32	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th QTR GW
Collection Date:
Lab ID: 1811A37-002
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
2-Hexanone	ND	0.91	10		µg/L	1	11/27/2018 6:40:00 PM	R55900
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/27/2018 6:40:00 PM	R55900
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Styrene	ND	0.25	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/27/2018 6:40:00 PM	R55900
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/27/2018 6:40:00 PM	R55900
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	11/27/2018 6:40:00 PM	R55900
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	11/27/2018 6:40:00 PM	R55900
Surr: Dibromofluoromethane	106	0	70-130		%Rec	1	11/27/2018 6:40:00 PM	R55900
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	11/27/2018 6:40:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/28/2018 4:22:53 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 4:22:53 PM	41699
Surr: DNOP	119	0	76.7-135		%Rec	1	11/28/2018 4:22:53 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/27/2018 12:39:55 A	G55859
Surr: BFB	81.4	0	72.8-125		%Rec	1	11/27/2018 12:39:55 A	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 1:07:58 PM	R55801
Chloride	2100	100	100		mg/L	200	11/29/2018 12:48:48 A	A55924
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/20/2018 1:20:51 PM	R55801
Bromide	3.5	0.10	0.50		mg/L	5	11/20/2018 1:07:58 PM	R55801
Nitrogen, Nitrate (As N)	26	0.25	0.50	*	mg/L	5	11/20/2018 1:07:58 PM	R55801
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 1:07:58 PM	R55801
Sulfate	160	0.63	2.5		mg/L	5	11/20/2018 1:07:58 PM	R55801
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.094	0.00099	0.0020		mg/L	1	12/29/2018 11:57:11 A	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 11:57:11 A	A56663
Calcium	83	0.078	1.0		mg/L	1	12/29/2018 11:57:11 A	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 11:57:11 A	A56663
Copper	0.0037	0.0032	0.0060	J	mg/L	1	12/29/2018 11:57:11 A	A56663
Iron	0.035	0.016	0.020		mg/L	1	12/29/2018 11:57:11 A	A56663
Magnesium	11	0.25	1.0		mg/L	1	12/29/2018 11:57:11 A	A56663
Manganese	0.0016	0.00039	0.0020	J	mg/L	1	12/29/2018 11:57:11 A	A56663
Potassium	4.8	0.11	1.0		mg/L	1	12/29/2018 11:57:11 A	A56663
Silver	0.0019	0.0018	0.0050	J	mg/L	1	12/29/2018 11:57:11 A	A56663
Sodium	1400	8.2	50		mg/L	50	12/29/2018 12:01:28 P	A56663
Zinc	0.023	0.0021	0.010		mg/L	1	12/29/2018 11:57:11 A	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.11	0.0010	0.0020		mg/L	1	12/11/2018 4:08:44 PM	41761
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 4:08:44 PM	41761
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 4:08:44 PM	41761
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 4:08:44 PM	41761
Iron	1.1	0.10	0.20	*	mg/L	10	12/11/2018 4:17:46 PM	41761
Manganese	0.021	0.0011	0.0020		mg/L	1	12/11/2018 4:08:44 PM	41761
Silver	0.0030	0.0012	0.0050	J	mg/L	1	12/11/2018 4:08:44 PM	41761
Zinc	0.020	0.0033	0.010		mg/L	1	12/11/2018 4:08:44 PM	41761
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0027	0.00042	0.0010		mg/L	1	12/6/2018 12:03:46 PM	A56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 12:03:46 PM	A56135
Selenium	0.0058	0.00076	0.0010		mg/L	1	12/6/2018 12:03:46 PM	A56135
Uranium	0.033	0.00048	0.0025	*	mg/L	5	12/6/2018 3:52:16 PM	A56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0030	0.00041	0.0010		mg/L	1	12/5/2018 2:45:30 PM	41761
Lead	0.00083	0.00023	0.00050		mg/L	1	12/5/2018 2:45:30 PM	41761
Selenium	0.0051	0.00098	0.0010		mg/L	1	12/5/2018 2:45:30 PM	41761
Uranium	0.032	0.00034	0.0025	*	mg/L	5	12/5/2018 2:43:34 PM	41761
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:34:40 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 12:46:06 P	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 12:46:06 P	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 12:46:06 P	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 12:46:06 P	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 12:46:06 P	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Carbazole	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 12:46:06 P	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 12:46:06 P	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 12:46:06 P	41702
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 12:46:06 P	41702
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 12:46:06 P	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 12:46:06 P	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 12:46:06 P	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 12:46:06 P	41702
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Methylphenol	ND	6.3	10		µg/L	1	12/13/2018 12:46:06 P	41702
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 12:46:06 P	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 12:46:06 P	41702
Naphthalene	ND	5.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 12:46:06 P	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 12:46:06 P	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 12:46:06 P	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	12/13/2018 12:46:06 P	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 12:46:06 P	41702
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 12:46:06 P	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 12:46:06 P	41702
Surr: 2-Fluorophenol	33.8	0	15-74.1		%Rec	1	12/13/2018 12:46:06 P	41702
Surr: Phenol-d5	25.2	0	15-59.8		%Rec	1	12/13/2018 12:46:06 P	41702
Surr: 2,4,6-Tribromophenol	62.3	0	22.1-112		%Rec	1	12/13/2018 12:46:06 P	41702
Surr: Nitrobenzene-d5	51.6	0	33.2-94		%Rec	1	12/13/2018 12:46:06 P	41702
Surr: 2-Fluorobiphenyl	44.8	0	34-90.9		%Rec	1	12/13/2018 12:46:06 P	41702
Surr: 4-Terphenyl-d14	56.8	0	15-149		%Rec	1	12/13/2018 12:46:06 P	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Toluene	ND	0.17	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Naphthalene	ND	0.29	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Acetone	ND	0.76	10		µg/L	1	11/27/2018 7:03:00 PM	R55900
Bromobenzene	ND	0.32	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Bromoform	ND	0.32	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Bromomethane	ND	0.27	3.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
2-Butanone	ND	1.4	10		µg/L	1	11/27/2018 7:03:00 PM	R55900
Carbon disulfide	ND	0.39	10		µg/L	1	11/27/2018 7:03:00 PM	R55900
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Chloroethane	ND	0.16	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Chloroform	ND	0.24	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Chloromethane	ND	0.32	3.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Dibromomethane	ND	0.32	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
2-Hexanone	ND	0.91	10		µg/L	1	11/27/2018 7:03:00 PM	R55900
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/27/2018 7:03:00 PM	R55900
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Styrene	ND	0.25	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/27/2018 7:03:00 PM	R55900
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/27/2018 7:03:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: STP1-NW
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:56:00 AM
Lab ID: 1811A37-003
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	11/27/2018 7:03:00 PM	R55900
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	11/27/2018 7:03:00 PM	R55900
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	11/27/2018 7:03:00 PM	R55900
Surr: Toluene-d8	96.8	0	70-130		%Rec	1	11/27/2018 7:03:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 10:01:00 AM
Lab ID: 1811A37-004
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 1:59:26 PM	R55801
Chloride	7.6	2.5	2.5		mg/L	5	11/20/2018 1:59:26 PM	R55801
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/20/2018 1:59:26 PM	R55801
Bromide	ND	0.10	0.50		mg/L	5	11/20/2018 1:59:26 PM	R55801
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 1:59:26 PM	R55801
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 1:59:26 PM	R55801
Sulfate	390	2.5	10		mg/L	20	11/20/2018 2:12:18 PM	R55801
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.012	0.00099	0.0020		mg/L	1	12/29/2018 12:03:42 P	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 12:03:42 P	A56663
Calcium	190	0.78	10		mg/L	10	12/29/2018 12:05:53 P	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 12:03:42 P	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 12:03:42 P	A56663
Iron	0.061	0.016	0.020		mg/L	1	12/29/2018 12:03:42 P	A56663
Magnesium	38	0.25	1.0		mg/L	1	12/29/2018 12:03:42 P	A56663
Manganese	0.00068	0.00039	0.0020	J	mg/L	1	12/29/2018 12:03:42 P	A56663
Potassium	1.2	0.11	1.0		mg/L	1	12/29/2018 12:03:42 P	A56663
Silver	0.0035	0.0018	0.0050	J	mg/L	1	12/29/2018 12:03:42 P	A56663
Sodium	17	0.16	1.0		mg/L	1	12/29/2018 12:03:42 P	A56663
Zinc	0.033	0.0021	0.010		mg/L	1	12/29/2018 12:03:42 P	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.013	0.0010	0.0020		mg/L	1	12/11/2018 4:20:06 PM	41761
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 4:20:06 PM	41761
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 4:20:06 PM	41761
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 4:20:06 PM	41761
Iron	0.089	0.010	0.020		mg/L	1	12/11/2018 4:20:06 PM	41761
Manganese	ND	0.0011	0.0020		mg/L	1	12/11/2018 4:20:06 PM	41761
Silver	0.0065	0.0012	0.0050		mg/L	1	12/11/2018 4:20:06 PM	41761
Zinc	ND	0.0033	0.010		mg/L	1	12/11/2018 4:20:06 PM	41761
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0033	0.00042	0.0010		mg/L	1	12/6/2018 12:06:11 PM	A56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 12:06:11 PM	A56135
Selenium	0.0010	0.00076	0.0010		mg/L	1	12/6/2018 12:06:11 PM	A56135
Uranium	0.0015	0.000096	0.00050		mg/L	1	12/6/2018 12:06:11 PM	A56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0038	0.00041	0.0010		mg/L	1	12/5/2018 2:53:19 PM	41761
Lead	ND	0.00023	0.00050		mg/L	1	12/5/2018 2:53:19 PM	41761

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 10:01:00 AM
Lab ID: 1811A37-004
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 2:53:19 PM	41761
Uranium	0.0013	0.000068	0.00050		mg/L	1	12/5/2018 2:53:19 PM	41761
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:36:56 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Acenaphthylene	ND	62	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Aniline	ND	62	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Anthracene	ND	57	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Azobenzene	ND	67	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benz(a)anthracene	ND	53	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzo(a)pyrene	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzoic acid	ND	63	200	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Benzyl alcohol	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Carbazole	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Chloroaniline	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Chloronaphthalene	ND	61	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Chlorophenol	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Chrysene	ND	68	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Dibenzofuran	ND	69	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 10:01:00 AM
Lab ID: 1811A37-004
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Diethyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Dimethyl phthalate	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Fluoranthene	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Fluorene	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Hexachlorobenzene	ND	62	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Hexachlorobutadiene	ND	64	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Hexachloroethane	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Isophorone	ND	62	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
1-Methylnaphthalene	ND	70	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Methylnaphthalene	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Methylphenol	ND	63	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
3+4-Methylphenol	ND	54	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Naphthalene	ND	50	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Nitroaniline	ND	59	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
3-Nitroaniline	ND	68	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Nitroaniline	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Nitrobenzene	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2-Nitrophenol	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
4-Nitrophenol	ND	56	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Pentachlorophenol	ND	53	200	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Phenanthrene	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Phenol	ND	60	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Pyrene	ND	65	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Pyridine	ND	54	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	12/14/2018 3:08:31 PM	41702
Surr: 2-Fluorophenol	0	0	15-74.1	SD	%Rec	10	12/14/2018 3:08:31 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 10:01:00 AM
Lab ID: 1811A37-004
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: Phenol-d5	0	0	15-59.8	SD	%Rec	10	12/14/2018 3:08:31 PM	41702
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	SD	%Rec	10	12/14/2018 3:08:31 PM	41702
Surr: Nitrobenzene-d5	0	0	33.2-94	SD	%Rec	10	12/14/2018 3:08:31 PM	41702
Surr: 2-Fluorobiphenyl	0	0	34-90.9	SD	%Rec	10	12/14/2018 3:08:31 PM	41702
Surr: 4-Terphenyl-d14	0	0	15-149	SD	%Rec	10	12/14/2018 3:08:31 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Toluene	ND	0.17	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Naphthalene	ND	0.29	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Acetone	ND	0.76	10		µg/L	1	11/27/2018 7:27:00 PM	R55900
Bromobenzene	ND	0.32	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Bromoform	ND	0.32	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Bromomethane	ND	0.27	3.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
2-Butanone	ND	1.4	10		µg/L	1	11/27/2018 7:27:00 PM	R55900
Carbon disulfide	ND	0.39	10		µg/L	1	11/27/2018 7:27:00 PM	R55900
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Chloroethane	ND	0.16	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Chloroform	ND	0.24	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Chloromethane	ND	0.32	3.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Dibromomethane	ND	0.32	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-4
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 10:01:00 AM
Lab ID: 1811A37-004
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
2-Hexanone	ND	0.91	10		µg/L	1	11/27/2018 7:27:00 PM	R55900
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/27/2018 7:27:00 PM	R55900
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Styrene	ND	0.25	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/27/2018 7:27:00 PM	R55900
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/27/2018 7:27:00 PM	R55900
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	1	11/27/2018 7:27:00 PM	R55900
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	11/27/2018 7:27:00 PM	R55900
Surr: Dibromofluoromethane	113	0	70-130		%Rec	1	11/27/2018 7:27:00 PM	R55900
Surr: Toluene-d8	95.1	0	70-130		%Rec	1	11/27/2018 7:27:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	9.9	0.63	1.0		mg/L	1	11/28/2018 4:45:00 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 4:45:00 PM	41699
Surr: DNOP	115	0	76.7-135		%Rec	1	11/28/2018 4:45:00 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.65	0.024	0.050		mg/L	1	11/27/2018 1:02:26 AM	G55859
Surr: BFB	201	0	72.8-125	S	%Rec	1	11/27/2018 1:02:26 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.7	0.50	0.50		mg/L	5	11/20/2018 2:25:10 PM	R55801
Chloride	1500	50	50		mg/L	100	11/29/2018 1:01:40 AM	A55924
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/20/2018 2:25:10 PM	R55801
Bromide	4.1	0.10	0.50		mg/L	5	11/20/2018 2:25:10 PM	R55801
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 2:25:10 PM	R55801
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 2:25:10 PM	R55801
Sulfate	5.1	0.63	2.5		mg/L	5	11/20/2018 2:25:10 PM	R55801
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.99	0.0049	0.010		mg/L	5	12/29/2018 12:10:23 P	A56663
Cadmium	ND	0.0050	0.010		mg/L	5	12/29/2018 12:10:23 P	A56663
Calcium	150	0.39	5.0		mg/L	5	12/29/2018 12:10:23 P	A56663
Chromium	ND	0.0064	0.030		mg/L	5	12/29/2018 12:10:23 P	A56663
Copper	ND	0.016	0.030		mg/L	5	12/29/2018 12:10:23 P	A56663
Iron	6.2	0.82	1.0	*	mg/L	50	12/29/2018 12:12:24 P	A56663
Magnesium	28	1.2	5.0		mg/L	5	12/29/2018 12:10:23 P	A56663
Manganese	1.7	0.0020	0.010	*	mg/L	5	12/29/2018 12:10:23 P	A56663
Potassium	3.3	0.56	5.0	J	mg/L	5	12/29/2018 12:10:23 P	A56663
Silver	ND	0.0092	0.025		mg/L	5	12/29/2018 12:10:23 P	A56663
Sodium	1300	8.2	50		mg/L	50	12/29/2018 12:12:24 P	A56663
Zinc	0.032	0.011	0.050	J	mg/L	5	12/29/2018 12:10:23 P	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.1	0.0050	0.010		mg/L	5	12/11/2018 4:24:28 PM	41761
Cadmium	ND	0.0029	0.010		mg/L	5	12/11/2018 4:24:28 PM	41761
Chromium	ND	0.0088	0.030		mg/L	5	12/11/2018 4:24:28 PM	41761
Copper	ND	0.020	0.030		mg/L	5	12/11/2018 4:24:28 PM	41761
Iron	6.9	0.51	1.0	*	mg/L	50	12/11/2018 4:26:31 PM	41761
Manganese	1.6	0.0055	0.010	*	mg/L	5	12/11/2018 4:24:28 PM	41761
Silver	ND	0.0061	0.025		mg/L	5	12/11/2018 4:24:28 PM	41761
Zinc	0.090	0.016	0.050		mg/L	5	12/11/2018 4:24:28 PM	41761
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0083	0.00042	0.0010		mg/L	1	12/6/2018 12:15:50 PM	C56135
Lead	0.00059	0.00017	0.00050		mg/L	1	12/6/2018 12:15:50 PM	C56135
Selenium	0.0010	0.00076	0.0010		mg/L	1	12/6/2018 12:15:50 PM	C56135
Uranium	0.0058	0.000096	0.00050		mg/L	1	12/6/2018 12:15:50 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0096	0.00041	0.0010		mg/L	1	12/5/2018 2:55:15 PM	41761
Lead	0.0064	0.00023	0.00050		mg/L	1	12/5/2018 2:55:15 PM	41761
Selenium	0.0011	0.00098	0.0010		mg/L	1	12/5/2018 2:55:15 PM	41761
Uranium	0.0099	0.000068	0.00050		mg/L	1	12/5/2018 2:55:15 PM	41761
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000079	0.000038	0.00020	J	mg/L	1	12/7/2018 12:39:13 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Acenaphthylene	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Aniline	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Anthracene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Azobenzene	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benz(a)anthracene	ND	26	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzo(a)pyrene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzo(b)fluoranthene	ND	36	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzo(k)fluoranthene	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzoic acid	ND	32	100		µg/L	1	12/13/2018 1:44:32 PM	41702
Benzyl alcohol	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Bis(2-ethylhexyl)phthalate	90	40	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Butyl benzyl phthalate	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Carbazole	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Chloroaniline	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Chloronaphthalene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Chlorophenol	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Chrysene	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Di-n-butyl phthalate	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Dibenzofuran	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
1,2-Dichlorobenzene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
1,3-Dichlorobenzene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
1,4-Dichlorobenzene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Diethyl phthalate	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Dimethyl phthalate	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4-Dichlorophenol	ND	29	100		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4-Dimethylphenol	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4-Dinitrophenol	ND	19	100		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4-Dinitrotoluene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2,6-Dinitrotoluene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Fluoranthene	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Fluorene	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Hexachlorobenzene	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Hexachlorobutadiene	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Hexachloroethane	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Isophorone	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
1-Methylnaphthalene	ND	35	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Methylnaphthalene	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Methylphenol	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
3+4-Methylphenol	ND	27	50		µg/L	1	12/13/2018 1:44:32 PM	41702
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	12/13/2018 1:44:32 PM	41702
N-Nitrosodimethylamine	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Naphthalene	ND	25	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Nitroaniline	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
3-Nitroaniline	ND	34	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Nitroaniline	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Nitrobenzene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2-Nitrophenol	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
4-Nitrophenol	ND	28	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Pentachlorophenol	ND	26	100		µg/L	1	12/13/2018 1:44:32 PM	41702
Phenanthrene	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	30	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Pyrene	ND	33	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Pyridine	ND	27	50		µg/L	1	12/13/2018 1:44:32 PM	41702
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	12/13/2018 1:44:32 PM	41702
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	12/13/2018 1:44:32 PM	41702
Surr: 2-Fluorophenol	46.5	0	15-74.1		%Rec	1	12/13/2018 1:44:32 PM	41702
Surr: Phenol-d5	35.9	0	15-59.8		%Rec	1	12/13/2018 1:44:32 PM	41702
Surr: 2,4,6-Tribromophenol	78.5	0	22.1-112		%Rec	1	12/13/2018 1:44:32 PM	41702
Surr: Nitrobenzene-d5	64.7	0	33.2-94		%Rec	1	12/13/2018 1:44:32 PM	41702
Surr: 2-Fluorobiphenyl	61.2	0	34-90.9		%Rec	1	12/13/2018 1:44:32 PM	41702
Surr: 4-Terphenyl-d14	58.2	0	15-149		%Rec	1	12/13/2018 1:44:32 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	170	0.35	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Toluene	1.1	0.34	2.0	J	µg/L	2	11/27/2018 7:50:00 PM	R55900
Ethylbenzene	17	0.45	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Methyl tert-butyl ether (MTBE)	290	0.91	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2,4-Trimethylbenzene	8.9	0.51	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2-Dichloroethane (EDC)	ND	0.38	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Naphthalene	2.4	0.58	4.0	J	µg/L	2	11/27/2018 7:50:00 PM	R55900
1-Methylnaphthalene	53	0.67	8.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Acetone	25	1.5	20		µg/L	2	11/27/2018 7:50:00 PM	R55900
Bromobenzene	ND	0.64	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Bromodichloromethane	ND	0.57	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Bromoform	ND	0.65	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Bromomethane	ND	0.55	6.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
2-Butanone	ND	2.8	20		µg/L	2	11/27/2018 7:50:00 PM	R55900
Carbon disulfide	ND	0.77	20		µg/L	2	11/27/2018 7:50:00 PM	R55900
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Chlorobenzene	ND	0.58	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Chloroethane	ND	0.33	4.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Chloroform	ND	0.47	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Chloromethane	ND	0.64	6.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Dibromochloromethane	ND	0.47	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Dibromomethane	ND	0.64	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1-Dichloroethane	1.3	0.35	2.0	J	µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1-Dichloroethene	ND	0.24	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
2-Hexanone	ND	1.8	20		µg/L	2	11/27/2018 7:50:00 PM	R55900
Isopropylbenzene	2.1	0.44	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
4-Isopropyltoluene	0.67	0.48	2.0	J	µg/L	2	11/27/2018 7:50:00 PM	R55900
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	11/27/2018 7:50:00 PM	R55900
Methylene Chloride	ND	0.41	6.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
n-Butylbenzene	ND	0.50	6.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
n-Propylbenzene	2.7	0.49	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
sec-Butylbenzene	0.50	0.40	2.0	J	µg/L	2	11/27/2018 7:50:00 PM	R55900
Styrene	ND	0.50	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Vinyl chloride	ND	0.24	2.0		µg/L	2	11/27/2018 7:50:00 PM	R55900
Xylenes, Total	7.1	1.3	3.0		µg/L	2	11/27/2018 7:50:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OAPIS-1
Project: 2018 4th QTR GW
Collection Date: 11/19/2018 11:30:00 AM
Lab ID: 1811A37-005
Matrix: AQUEOUS
Received Date: 11/20/2018 9:10:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	2	11/27/2018 7:50:00 PM	R55900
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	2	11/27/2018 7:50:00 PM	R55900
Surr: Dibromofluoromethane	108	0	70-130		%Rec	2	11/27/2018 7:50:00 PM	R55900
Surr: Toluene-d8	96.4	0	70-130		%Rec	2	11/27/2018 7:50:00 PM	R55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	11/27/2018 17:49	WG1201909

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0888		0.00500	1	11/27/2018 17:50	WG1201909

Method Blank (MB)

(MB) R3363417-1 11/27/18 17:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Cyanide	U		0.00180	0.00500

L1046174-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1046174-01 11/27/18 17:35 • (DUP) R3363417-3 11/27/18 17:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.000	1	0.000		20

L1046708-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1046708-10 11/27/18 17:57 • (DUP) R3363417-6 11/27/18 17:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND	0.00438	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3363417-2 11/27/18 17:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.110	110	85.0-115	

L1046283-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046283-03 11/27/18 17:39 • (MS) R3363417-4 11/27/18 17:40 • (MSD) R3363417-5 11/27/18 17:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	ND	0.0961	0.0905	93.1	87.5	1	75.0-125			6.00	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895971** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Calcium	50	1.0	50.00	0	99.4	85	115			
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.8	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Magnesium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	49	1.0	50.00	0	98.3	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.47	0.010	0.5000	0	94.8	85	115			

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	87.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	99.1	50	150			J
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A56663**	RunNo:	**56663**					
Prep Date:		Analysis Date:	**12/29/2018**	SeqNo:	**1895972**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.2	50	150			J
Iron	0.022	0.020	0.02000	0	111	50	150			
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.53	1.0	0.5000	0	107	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.4	50	150			J
Sodium	0.46	1.0	0.5000	0	91.5	50	150			J
Zinc	0.0052	0.010	0.005000	0	105	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID	**MB-41761**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**41761**	RunNo:	**56108**					
Prep Date:	**11/28/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1874267**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LCS-41761**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**41761**	RunNo:	**56108**					
Prep Date:	**11/28/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1874268**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	103	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			

Sample ID	**LLLCS-41761**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**41761**	RunNo:	**56108**					
Prep Date:	**11/28/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1874269**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	107	50	150			
Cadmium	0.0020	0.0020	0.002000	0	100	50	150			
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0060	0.0060	0.006000	0	101	50	150			
Iron	0.029	0.020	0.02000	0	147	50	150			
Manganese	0.0023	0.0020	0.002000	0	116	50	150			
Silver	0.0047	0.0050	0.005000	0	93.9	50	150			J

Sample ID	**MB-41761**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**41761**	RunNo:	**56188**					
Prep Date:	**11/28/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876887**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID	**LCS-41761**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**41761**		RunNo:	**56188**				
Prep Date:	**11/28/2018**	Analysis Date:	**12/7/2018**		SeqNo:	**1876888**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	98.6	85	115			

Sample ID	**LLLCS-41761**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**41761**		RunNo:	**56188**				
Prep Date:	**11/28/2018**	Analysis Date:	**12/7/2018**		SeqNo:	**1876889**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0072	0.010	0.005000	0	145	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A56135**	RunNo: **56135**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A56135**	RunNo: **56135**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875053** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00094	0.0010	0.001000	0	93.8	50	150			J
Lead	0.00047	0.00050	0.0005000	0	94.9	50	150			J
Selenium	0.00096	0.0010	0.001000	0	95.9	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	88.9	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A56135**	RunNo: **56135**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875054** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.9	85	115			
Lead	0.012	0.00050	0.01250	0	96.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.8	85	115			
Uranium	0.012	0.00050	0.01250	0	95.3	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56135**	RunNo: **56135**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875360** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56135**	RunNo: **56135**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875361** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C56135**	RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**	SeqNo:	**1875361**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	97.7	50	150			J
Lead	0.00046	0.00050	0.0005000	0	92.9	50	150			J
Selenium	0.00098	0.0010	0.001000	0	98.3	50	150			J
Uranium	0.00045	0.00050	0.0005000	0	89.9	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C56135**	RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**	SeqNo:	**1875362**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	102	85	115			
Lead	0.012	0.00050	0.01250	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID	**MB-41761**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41761**	RunNo:	**55942**					
Prep Date:	**11/28/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1866841**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41761**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41761**	RunNo:	**55942**					
Prep Date:	**11/28/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1866843**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.1	50	150			J
Selenium	0.0010	0.0010	0.001000	0	103	50	150			

Sample ID	**MSLCS-41761**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41761**	RunNo:	**55942**					
Prep Date:	**11/28/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1866845**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	105	85	115			
Lead	0.013	0.00050	0.01250	0	105	85	115			
Selenium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID	**MB-41761**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41761**	RunNo:	**55942**					
Prep Date:	**11/28/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1867148**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41761**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41761**	RunNo:	**55942**					
Prep Date:	**11/28/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1867150**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00050	0.00050	0.0005000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID	**MSLCS-41761**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **41761**		RunNo: **55942**						
Prep Date:	**11/28/2018**	Analysis Date: **11/29/2018**		SeqNo: **1867152**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	107	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID	**MB-41958**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**41958**	RunNo:	**56165**					
Prep Date:	**12/6/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876122**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-41958**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**41958**	RunNo:	**56165**					
Prep Date:	**12/6/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876123**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55801**	RunNo: **55801**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55801**	RunNo: **55801**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	4.9	0.50	5.000	0	97.8	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	99.5	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	104	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.7	90	110			
Sulfate	9.7	0.50	10.00	0	96.9	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A55924**	RunNo: **55924**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A55924**	RunNo: **55924**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID **MB-41699**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	76.7	135			

Sample ID **LCS-41699**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866057** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.7	70	130			
Surr: DNOP	0.56		0.5000		112	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		87.1	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.6	77.7	130			
Surr: BFB	20		20.00		98.1	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55900**	RunNo: **55900**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864851** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.2	70	130			
Toluene	19	1.0	20.00	0	96.2	70	130			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55900**	RunNo: **55900**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864854** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55900**	RunNo: **55900**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864854** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55900**	RunNo: **55900**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864854** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**

08-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th QTR GW

Sample ID **lcs-41702**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSW**	Batch ID: **41702**	RunNo: **56330**							
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882521**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	55.1	104			
4-Chloro-3-methylphenol	150	10	200.0	0	76.1	57	115			
2-Chlorophenol	150	10	200.0	0	73.0	43.4	112			
1,4-Dichlorobenzene	66	10	100.0	0	65.9	38	95.2			
2,4-Dinitrotoluene	60	10	100.0	0	59.9	55.1	96.7			
N-Nitrosodi-n-propylamine	73	10	100.0	0	72.8	55	112			
4-Nitrophenol	95	10	200.0	0	47.5	16.6	93			
Pentachlorophenol	120	20	200.0	0	61.4	43.2	104			
Phenol	110	10	200.0	0	56.3	21.3	85.7			
Pyrene	81	10	100.0	0	80.7	64.9	105			
1,2,4-Trichlorobenzene	76	10	100.0	0	75.6	42.6	107			
Surr: 2-Fluorophenol	130		200.0		64.4	15	74.1			
Surr: Phenol-d5	110		200.0		55.4	15	59.8			
Surr: 2,4,6-Tribromophenol	160		200.0		81.8	22.1	112			
Surr: Nitrobenzene-d5	77		100.0		77.0	33.2	94			
Surr: 2-Fluorobiphenyl	73		100.0		72.7	34	90.9			
Surr: 4-Terphenyl-d14	77		100.0		76.8	15	149			

Sample ID **lcsd-41702**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **LCSS02**	Batch ID: **41702**	RunNo: **56330**							
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882522**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	59.9	55.1	104	16.6	34.9	
4-Chloro-3-methylphenol	130	10	200.0	0	67.3	57	115	12.2	30.2	
2-Chlorophenol	130	10	200.0	0	64.2	43.4	112	12.8	49.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.5	38	95.2	24.5	43.2	
2,4-Dinitrotoluene	56	10	100.0	0	56.1	55.1	96.7	6.48	49.9	
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.4	55	112	9.14	42.1	
4-Nitrophenol	82	10	200.0	0	41.0	16.6	93	14.6	31.5	
Pentachlorophenol	120	20	200.0	0	61.1	43.2	104	0.506	52.5	
Phenol	90	10	200.0	0	44.8	21.3	85.7	22.8	54.4	
Pyrene	78	10	100.0	0	78.4	64.9	105	2.94	30.7	
1,2,4-Trichlorobenzene	57	10	100.0	0	57.2	42.6	107	27.6	48.1	
Surr: 2-Fluorophenol	110		200.0		54.8	15	74.1	0	0	
Surr: Phenol-d5	92		200.0		46.2	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		74.7	22.1	112	0	0	
Surr: Nitrobenzene-d5	65		100.0		65.2	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.9	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID	**lcsd-41702**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**41702**		RunNo:	**56330**				
Prep Date:	**11/26/2018**	Analysis Date:	**12/13/2018**		SeqNo:	**1882522**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	67		100.0		67.4	15	149	0	0	

Sample ID	**mb-41702**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**41702**		RunNo:	**56330**				
Prep Date:	**11/26/2018**	Analysis Date:	**12/13/2018**		SeqNo:	**1882523**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	16	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID **mb-41702**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41702**	RunNo: **56330**
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882523** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A37**
08-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th QTR GW

Sample ID **mb-41702**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**							
Client ID: **PBW**	Batch ID: **41702**	RunNo: **56330**							
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882523**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.5	15	74.1			
Surr: Phenol-d5	110		200.0		54.5	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.1	22.1	112			
Surr: Nitrobenzene-d5	75		100.0		74.7	33.2	94			
Surr: 2-Fluorobiphenyl	71		100.0		70.7	34	90.9			
Surr: 4-Terphenyl-d14	69		100.0		69.0	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1811A37 RcptNo: 1

Received By: Victoria Zellar 11/20/2018 9:10:00 AM Victoria Zellar

Completed By: Anne Thorne 11/20/2018 10:01:29 AM Anne Thorne

Reviewed By: JAB 11/20/18

Labeled by: DAD 11/20/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ DAD 11/20/18
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 9-2 (<2 or >12 unless noted)
Adjusted? YES
Checked by: DAD 11/20/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: Added approx. .5mL of HNO3 to sample 005F to achieve acceptable pH. Held 24hrs. prior to Analysis. DAD 11/20/18

CUSTODY SEALS INTACT ON SAMPLE BOTTLES/at 11/20/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	Good	Yes			

Chain-of-Custody Record

Client: Gallup-Marathon

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☑ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: 2018 4th QTR GW

Project #:

Project Manager: C Johnson

Sampler: C Johnson

On Ice: ☑ Yes ☐ No

Sample Temperature: Ice

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811A37	Analysis Request: BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8015D GRO/DRO	WQC T+D	Cations/Anions	Cyanide	Air Bubbles (Y or N)
~~0700~~																~~X~~						
11-19-18	0700	AQ	Field Blank	Mix	Misc	001										X						
	0700		Trip Blank			002										X						
	1156		STP1-NW			003										X	X	X	X	X		
	1001 11/19/2018		PW-4			004										X	X		X	X	X	
	1130		OAPIS-1			005										X	X	X	X	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
11/19/18	1240		Victoria Pillan	11/20/18	9:10	Courier VVZ 11/20/18 9:10
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	11/27/2018 17:49	WG1201909

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0888		0.00500	1	11/27/2018 17:50	WG1201909

Method Blank (MB)

(MB) R3363417-1 11/27/18 17:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1046174-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1046174-01 11/27/18 17:35 • (DUP) R3363417-3 11/27/18 17:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.000	1	0.000		20

L1046708-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1046708-10 11/27/18 17:57 • (DUP) R3363417-6 11/27/18 17:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	ND	0.00438	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3363417-2 11/27/18 17:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.110	110	85.0-115	

L1046283-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1046283-03 11/27/18 17:39 • (MS) R3363417-4 11/27/18 17:40 • (MSD) R3363417-5 11/27/18 17:43

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.0961	0.0905	93.1	87.5	1	75.0-125			6.00	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2018 4th Qtr GW Sampling OrderNo.: 1811A96

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 7:00:00 AM
Lab ID: 1811A96-001 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Toluene	ND	0.17	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Naphthalene	ND	0.29	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Acetone	ND	0.76	10		µg/L	1	11/28/2018 1:48:00 PM	R55932
Bromobenzene	ND	0.32	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Bromoform	ND	0.32	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Bromomethane	ND	0.27	3.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
2-Butanone	ND	1.4	10		µg/L	1	11/28/2018 1:48:00 PM	R55932
Carbon disulfide	ND	0.39	10		µg/L	1	11/28/2018 1:48:00 PM	R55932
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Chloroethane	ND	0.16	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Chloroform	ND	0.24	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Chloromethane	ND	0.32	3.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Dibromomethane	ND	0.32	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 7:00:00 AM
Lab ID: 1811A96-001 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
2-Hexanone	ND	0.91	10		µg/L	1	11/28/2018 1:48:00 PM	R55932
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/28/2018 1:48:00 PM	R55932
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Styrene	ND	0.25	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/28/2018 1:48:00 PM	R55932
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/28/2018 1:48:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	11/28/2018 1:48:00 PM	R55932
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	11/28/2018 1:48:00 PM	R55932
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	1	11/28/2018 1:48:00 PM	R55932
Surr: Toluene-d8	93.9	0	70-130		%Rec	1	11/28/2018 1:48:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811A96-002
Matrix: TRIP BLANK
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Toluene	ND	0.17	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Naphthalene	ND	0.29	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Acetone	ND	0.76	10		µg/L	1	11/28/2018 2:12:00 PM	R55932
Bromobenzene	ND	0.32	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Bromoform	ND	0.32	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Bromomethane	ND	0.27	3.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
2-Butanone	ND	1.4	10		µg/L	1	11/28/2018 2:12:00 PM	R55932
Carbon disulfide	ND	0.39	10		µg/L	1	11/28/2018 2:12:00 PM	R55932
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Chloroethane	ND	0.16	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Chloroform	ND	0.24	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Chloromethane	ND	0.32	3.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Dibromomethane	ND	0.32	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811A96-002
Matrix: TRIP BLANK
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
2-Hexanone	ND	0.91	10		µg/L	1	11/28/2018 2:12:00 PM	R55932
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/28/2018 2:12:00 PM	R55932
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Styrene	ND	0.25	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/28/2018 2:12:00 PM	R55932
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/28/2018 2:12:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	11/28/2018 2:12:00 PM	R55932
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	11/28/2018 2:12:00 PM	R55932
Surr: Dibromofluoromethane	97.7	0	70-130		%Rec	1	11/28/2018 2:12:00 PM	R55932
Surr: Toluene-d8	92.8	0	70-130		%Rec	1	11/28/2018 2:12:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	11/29/2018 1:35:34 PM	41772
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	4.5	0.63	1.0		mg/L	1	11/28/2018 5:07:31 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 5:07:31 PM	41699
Surr: DNOP	118	0	76.7-135		%Rec	1	11/28/2018 5:07:31 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	7.6	0.49	1.0		mg/L	20	11/27/2018 1:47:24 AM	G55859
Surr: BFB	95.0	0	72.8-125		%Rec	20	11/27/2018 1:47:24 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.1	0.50	0.50		mg/L	5	11/20/2018 7:22:57 PM	R55800
Chloride	210	10	10		mg/L	20	11/20/2018 7:35:50 PM	R55800
Nitrogen, Nitrite (As N)	0.093	0.025	0.50	J	mg/L	5	11/20/2018 7:22:57 PM	R55800
Bromide	2.2	0.10	0.50		mg/L	5	11/20/2018 7:22:57 PM	R55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 7:22:57 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 7:22:57 PM	R55800
Sulfate	9.6	0.63	2.5		mg/L	5	11/20/2018 7:22:57 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	2.6	0.0099	0.020	*	mg/L	10	12/29/2018 12:40:09 P	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 12:33:53 P	A56663
Calcium	120	0.78	10		mg/L	10	12/29/2018 12:40:09 P	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 12:33:53 P	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 12:33:53 P	A56663
Iron	1.0	0.16	0.20	*	mg/L	10	12/29/2018 12:40:09 P	A56663
Magnesium	28	0.25	1.0		mg/L	1	12/29/2018 12:33:53 P	A56663
Manganese	1.5	0.0039	0.020	*	mg/L	10	12/29/2018 12:40:09 P	A56663
Potassium	0.68	0.11	1.0	J	mg/L	1	12/29/2018 12:33:53 P	A56663
Silver	0.0023	0.0018	0.0050	J	mg/L	1	12/29/2018 12:33:53 P	A56663
Sodium	350	1.6	10		mg/L	10	12/29/2018 12:40:09 P	A56663
Zinc	0.029	0.0021	0.010		mg/L	1	12/29/2018 12:33:53 P	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.1	0.0050	0.010	*	mg/L	5	12/11/2018 4:30:53 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 4:28:43 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 4:28:43 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 4:28:43 PM	41783
Iron	5.1	0.10	0.20	*	mg/L	10	12/13/2018 2:04:54 PM	41783
Manganese	2.3	0.0055	0.010	*	mg/L	5	12/11/2018 4:30:53 PM	41783
Silver	0.0034	0.0012	0.0050	J	mg/L	1	12/11/2018 4:28:43 PM	41783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0057	0.0033	0.010	J	mg/L	1	12/11/2018 4:28:43 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0075	0.00042	0.0010		mg/L	1	12/4/2018 2:39:04 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:39:04 PM	B56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 2:39:04 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.011	0.00041	0.0010	*	mg/L	1	12/5/2018 4:05:16 PM	41783
Lead	0.00039	0.00023	0.00050	J	mg/L	1	12/5/2018 4:05:16 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:05:16 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:43:49 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 2:13:47 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Carbazole	15	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 2:13:47 PM	41702
1-Methylnaphthalene	100	7.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Methylnaphthalene	110	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Methylphenol	ND	6.3	10		µg/L	1	12/13/2018 2:13:47 PM	41702
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 2:13:47 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Naphthalene	200	5.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 2:13:47 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 2:13:47 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Phenol	ND	6.0	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 2:13:47 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 2:13:47 PM	41702
Surr: 2-Fluorophenol	19.6	0	15-74.1		%Rec	1	12/13/2018 2:13:47 PM	41702
Surr: Phenol-d5	29.6	0	15-59.8		%Rec	1	12/13/2018 2:13:47 PM	41702
Surr: 2,4,6-Tribromophenol	72.6	0	22.1-112		%Rec	1	12/13/2018 2:13:47 PM	41702
Surr: Nitrobenzene-d5	57.6	0	33.2-94		%Rec	1	12/13/2018 2:13:47 PM	41702
Surr: 2-Fluorobiphenyl	48.1	0	34-90.9		%Rec	1	12/13/2018 2:13:47 PM	41702
Surr: 4-Terphenyl-d14	49.7	0	15-149		%Rec	1	12/13/2018 2:13:47 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1100	3.5	20		µg/L	20	11/28/2018 2:37:00 PM	R55932
Toluene	11	0.34	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Ethylbenzene	610	4.5	20		µg/L	20	11/28/2018 2:37:00 PM	R55932
Methyl tert-butyl ether (MTBE)	2200	9.1	20		µg/L	20	11/28/2018 2:37:00 PM	R55932
1,2,4-Trimethylbenzene	460	5.1	20		µg/L	20	11/28/2018 2:37:00 PM	R55932
1,3,5-Trimethylbenzene	73	0.46	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.38	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Naphthalene	320	5.8	40		µg/L	20	11/28/2018 2:37:00 PM	R55932
1-Methylnaphthalene	180	6.7	80		µg/L	20	11/28/2018 2:37:00 PM	R55932
2-Methylnaphthalene	170	0.69	8.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Acetone	20	1.5	20	J	µg/L	2	11/28/2018 3:01:00 PM	R55932
Bromobenzene	ND	0.64	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Bromodichloromethane	ND	0.57	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Bromoform	ND	0.65	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Bromomethane	ND	0.55	6.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
2-Butanone	ND	2.8	20		µg/L	2	11/28/2018 3:01:00 PM	R55932
Carbon disulfide	ND	0.77	20		µg/L	2	11/28/2018 3:01:00 PM	R55932
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Chlorobenzene	ND	0.58	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Chloroethane	0.44	0.33	4.0	J	µg/L	2	11/28/2018 3:01:00 PM	R55932
Chloroform	ND	0.47	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Chloromethane	ND	0.64	6.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,2-DCE	7.1	0.75	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Dibromochloromethane	ND	0.47	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Dibromomethane	ND	0.64	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1-Dichloroethane	11	0.35	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1-Dichloroethene	17	0.24	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
2-Hexanone	ND	1.8	20		µg/L	2	11/28/2018 3:01:00 PM	R55932
Isopropylbenzene	20	0.44	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
4-Isopropyltoluene	3.9	0.48	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	11/28/2018 3:01:00 PM	R55932
Methylene Chloride	ND	0.41	6.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
n-Butylbenzene	6.1	0.50	6.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
n-Propylbenzene	49	0.49	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
sec-Butylbenzene	3.7	0.40	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Styrene	0.96	0.50	2.0	J	µg/L	2	11/28/2018 3:01:00 PM	R55932
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Trichloroethene (TCE)	1.5	0.52	2.0	J	µg/L	2	11/28/2018 3:01:00 PM	R55932
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	11/28/2018 3:01:00 PM	R55932
Vinyl chloride	ND	0.24	2.0		µg/L	2	11/28/2018 3:01:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-4
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:10:00 AM
Lab ID: 1811A96-003
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Xylenes, Total	650	13	30		µg/L	20	11/28/2018 2:37:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	2	11/28/2018 3:01:00 PM	R55932
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	2	11/28/2018 3:01:00 PM	R55932
Surr: Dibromofluoromethane	92.6	0	70-130		%Rec	2	11/28/2018 3:01:00 PM	R55932
Surr: Toluene-d8	95.5	0	70-130		%Rec	2	11/28/2018 3:01:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.7	0.63	1.0		mg/L	1	11/28/2018 6:13:49 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 6:13:49 PM	41699
Surr: DNOP	117	0	76.7-135		%Rec	1	11/28/2018 6:13:49 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	41	2.4	5.0		mg/L	100	11/27/2018 2:09:54 AM	G55859
Surr: BFB	88.6	0	72.8-125		%Rec	100	11/27/2018 2:09:54 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 8:14:23 PM	R55800
Chloride	1200	50	50		mg/L	100	11/29/2018 1:14:32 AM	A55924
Nitrogen, Nitrite (As N)	0.35	0.025	0.50	J	mg/L	5	11/20/2018 8:14:23 PM	R55800
Bromide	0.90	0.10	0.50		mg/L	5	11/20/2018 8:14:23 PM	R55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 8:14:23 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 8:14:23 PM	R55800
Sulfate	1.7	0.63	2.5	J	mg/L	5	11/20/2018 8:14:23 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.2	0.0099	0.020	*	mg/L	10	12/29/2018 12:51:28 P	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 12:49:22 P	A56663
Calcium	200	0.78	10		mg/L	10	12/29/2018 12:51:28 P	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 12:49:22 P	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 12:49:22 P	A56663
Iron	3.8	0.16	0.20	*	mg/L	10	12/29/2018 12:51:28 P	A56663
Magnesium	54	0.25	1.0		mg/L	1	12/29/2018 12:49:22 P	A56663
Manganese	4.0	0.0039	0.020	*	mg/L	10	12/29/2018 12:51:28 P	A56663
Potassium	1.2	0.11	1.0		mg/L	1	12/29/2018 12:49:22 P	A56663
Silver	0.0052	0.0018	0.0050		mg/L	1	12/29/2018 12:49:22 P	A56663
Sodium	880	1.6	10		mg/L	10	12/29/2018 12:51:28 P	A56663
Zinc	0.040	0.0021	0.010		mg/L	1	12/29/2018 12:49:22 P	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	3.3	0.0050	0.010	*	mg/L	5	12/11/2018 4:35:15 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 4:32:59 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 4:32:59 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 4:32:59 PM	41783
Iron	5.9	0.10	0.20	*	mg/L	10	12/13/2018 2:07:02 PM	41783
Manganese	4.0	0.0055	0.010	*	mg/L	5	12/11/2018 4:35:15 PM	41783
Silver	0.0056	0.0012	0.0050		mg/L	1	12/11/2018 4:32:59 PM	41783
Zinc	0.0058	0.0033	0.010	J	mg/L	1	12/11/2018 4:32:59 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0098	0.00042	0.0010		mg/L	1	12/4/2018 2:43:54 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:43:54 PM	B56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 2:43:54 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.013	0.00041	0.0010	*	mg/L	1	12/5/2018 4:07:12 PM	41783
Lead	0.00042	0.00023	0.00050	J	mg/L	1	12/5/2018 4:07:12 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:07:12 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:46:08 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Aniline	9.2	6.2	10	J	µg/L	1	12/13/2018 2:43:02 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 2:43:02 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Carbazole	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 2:43:02 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4-Dimethylphenol	28	5.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 2:43:02 PM	41702
1-Methylnaphthalene	8.4	7.0	10	J	µg/L	1	12/13/2018 2:43:02 PM	41702
2-Methylnaphthalene	9.1	6.3	10	J	µg/L	1	12/13/2018 2:43:02 PM	41702
2-Methylphenol	98	6.3	10		µg/L	1	12/13/2018 2:43:02 PM	41702
3+4-Methylphenol	100	5.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 2:43:02 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Naphthalene	38	5.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 2:43:02 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 2:43:02 PM	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Phenol	92	6.0	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 2:43:02 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 2:43:02 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 2:43:02 PM	41702
Surr: 2-Fluorophenol	5.58	0	15-74.1	S	%Rec	1	12/13/2018 2:43:02 PM	41702
Surr: Phenol-d5	33.4	0	15-59.8		%Rec	1	12/13/2018 2:43:02 PM	41702
Surr: 2,4,6-Tribromophenol	70.3	0	22.1-112		%Rec	1	12/13/2018 2:43:02 PM	41702
Surr: Nitrobenzene-d5	59.8	0	33.2-94		%Rec	1	12/13/2018 2:43:02 PM	41702
Surr: 2-Fluorobiphenyl	57.5	0	34-90.9		%Rec	1	12/13/2018 2:43:02 PM	41702
Surr: 4-Terphenyl-d14	61.2	0	15-149		%Rec	1	12/13/2018 2:43:02 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	35	200		µg/L	200	11/28/2018 3:25:00 PM	R55932
Toluene	4700	8.4	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Ethylbenzene	470	11	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Methyl tert-butyl ether (MTBE)	71	23	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2,4-Trimethylbenzene	310	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,3,5-Trimethylbenzene	70	12	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2-Dichloroethane (EDC)	ND	9.5	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Naphthalene	49	14	100	J	µg/L	50	11/29/2018 12:32:00 P	R55969
1-Methylnaphthalene	ND	17	200		µg/L	50	11/29/2018 12:32:00 P	R55969
2-Methylnaphthalene	ND	17	200		µg/L	50	11/29/2018 12:32:00 P	R55969
Acetone	ND	38	500		µg/L	50	11/29/2018 12:32:00 P	R55969
Bromobenzene	ND	16	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Bromodichloromethane	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Bromoform	ND	16	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Bromomethane	ND	14	150		µg/L	50	11/29/2018 12:32:00 P	R55969
2-Butanone	ND	71	500		µg/L	50	11/29/2018 12:32:00 P	R55969
Carbon disulfide	ND	19	500		µg/L	50	11/29/2018 12:32:00 P	R55969
Carbon Tetrachloride	ND	6.9	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Chlorobenzene	ND	15	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Chloroethane	14	8.2	100	J	µg/L	50	11/29/2018 12:32:00 P	R55969
Chloroform	ND	12	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Chloromethane	ND	16	150		µg/L	50	11/29/2018 12:32:00 P	R55969
2-Chlorotoluene	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
4-Chlorotoluene	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
cis-1,2-DCE	ND	19	50		µg/L	50	11/29/2018 12:32:00 P	R55969
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	11/29/2018 12:32:00 P	R55969

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	12	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Dibromomethane	ND	16	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2-Dichlorobenzene	ND	16	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,3-Dichlorobenzene	ND	16	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,4-Dichlorobenzene	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Dichlorodifluoromethane	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1-Dichloroethane	23	8.8	50	J	µg/L	50	11/29/2018 12:32:00 P	R55969
1,1-Dichloroethene	ND	6.0	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2-Dichloropropane	ND	8.3	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,3-Dichloropropane	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
2,2-Dichloropropane	ND	12	100		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1-Dichloropropene	ND	8.1	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Hexachlorobutadiene	ND	20	50		µg/L	50	11/29/2018 12:32:00 P	R55969
2-Hexanone	ND	45	500		µg/L	50	11/29/2018 12:32:00 P	R55969
Isopropylbenzene	14	11	50	J	µg/L	50	11/29/2018 12:32:00 P	R55969
4-Isopropyltoluene	ND	12	50		µg/L	50	11/29/2018 12:32:00 P	R55969
4-Methyl-2-pentanone	ND	23	500		µg/L	50	11/29/2018 12:32:00 P	R55969
Methylene Chloride	ND	10	150		µg/L	50	11/29/2018 12:32:00 P	R55969
n-Butylbenzene	ND	12	150		µg/L	50	11/29/2018 12:32:00 P	R55969
n-Propylbenzene	25	12	50	J	µg/L	50	11/29/2018 12:32:00 P	R55969
sec-Butylbenzene	ND	10	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Styrene	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
tert-Butylbenzene	ND	11	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	11/29/2018 12:32:00 P	R55969
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	11/29/2018 12:32:00 P	R55969
trans-1,2-DCE	ND	9.1	50		µg/L	50	11/29/2018 12:32:00 P	R55969
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1,1-Trichloroethane	ND	8.2	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,1,2-Trichloroethane	ND	12	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Trichloroethene (TCE)	ND	13	50		µg/L	50	11/29/2018 12:32:00 P	R55969
Trichlorofluoromethane	ND	7.2	50		µg/L	50	11/29/2018 12:32:00 P	R55969
1,2,3-Trichloropropane	ND	28	100		µg/L	50	11/29/2018 12:32:00 P	R55969
Vinyl chloride	13	6.1	50	J	µg/L	50	11/29/2018 12:32:00 P	R55969
Xylenes, Total	2500	32	75		µg/L	50	11/29/2018 12:32:00 P	R55969
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	50	11/29/2018 12:32:00 P	R55969
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	50	11/29/2018 12:32:00 P	R55969

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-11
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:30:00 AM
Lab ID: 1811A96-004
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	93.4	0	70-130		%Rec	50	11/29/2018 12:32:00 P	R55969
Surr: Toluene-d8	94.8	0	70-130		%Rec	50	11/29/2018 12:32:00 P	R55969

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.8	0.63	1.0		mg/L	1	11/28/2018 6:35:58 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 6:35:58 PM	41699
Surr: DNOP	117	0	76.7-135		%Rec	1	11/28/2018 6:35:58 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	53	2.4	5.0		mg/L	100	11/27/2018 2:32:19 AM	G55859
Surr: BFB	94.4	0	72.8-125		%Rec	100	11/27/2018 2:32:19 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 8:40:08 PM	R55800
Chloride	320	10	10		mg/L	20	11/20/2018 8:53:00 PM	R55800
Nitrogen, Nitrite (As N)	0.12	0.025	0.50	J	mg/L	5	11/20/2018 8:40:08 PM	R55800
Bromide	0.66	0.10	0.50		mg/L	5	11/20/2018 8:40:08 PM	R55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 8:40:08 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 8:40:08 PM	R55800
Sulfate	ND	0.63	2.5		mg/L	5	11/20/2018 8:40:08 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.0	0.0049	0.010	*	mg/L	5	12/29/2018 12:55:55 P	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 12:53:52 P	A56663
Calcium	140	0.39	5.0		mg/L	5	12/29/2018 12:55:55 P	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 12:53:52 P	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 12:53:52 P	A56663
Iron	6.1	0.82	1.0	*	mg/L	50	12/29/2018 12:57:54 P	A56663
Magnesium	31	0.25	1.0		mg/L	1	12/29/2018 12:53:52 P	A56663
Manganese	2.9	0.0020	0.010	*	mg/L	5	12/29/2018 12:55:55 P	A56663
Potassium	0.48	0.11	1.0	J	mg/L	1	12/29/2018 12:53:52 P	A56663
Silver	0.0029	0.0018	0.0050	J	mg/L	1	12/29/2018 12:53:52 P	A56663
Sodium	280	0.82	5.0		mg/L	5	12/29/2018 12:55:55 P	A56663
Zinc	0.027	0.0021	0.010		mg/L	1	12/29/2018 12:53:52 P	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.3	0.0050	0.010	*	mg/L	5	12/11/2018 5:12:18 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 4:37:22 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 4:37:22 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 4:37:22 PM	41783
Iron	8.3	0.10	0.20	*	mg/L	10	12/13/2018 2:09:08 PM	41783
Manganese	3.0	0.0055	0.010	*	mg/L	5	12/11/2018 5:12:18 PM	41783
Silver	0.0035	0.0012	0.0050	J	mg/L	1	12/11/2018 4:37:22 PM	41783
Zinc	0.0037	0.0033	0.010	J	mg/L	1	12/11/2018 4:37:22 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0080	0.00042	0.0010		mg/L	1	12/4/2018 2:51:09 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:51:09 PM	B56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 2:51:09 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.011	0.00041	0.0010	*	mg/L	1	12/5/2018 4:09:08 PM	41783
Lead	0.00080	0.00023	0.00050		mg/L	1	12/5/2018 4:09:08 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:09:08 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:48:18 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 3:12:13 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Carbazole	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 3:12:13 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4-Dimethylphenol	14	5.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 3:12:13 PM	41702
1-Methylnaphthalene	34	7.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Methylnaphthalene	51	6.3	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Methylphenol	8.5	6.3	10	J	µg/L	1	12/13/2018 3:12:13 PM	41702
3+4-Methylphenol	6.8	5.4	10	J	µg/L	1	12/13/2018 3:12:13 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 3:12:13 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Naphthalene	98	5.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 3:12:13 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 3:12:13 PM	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Phenol	28	6.0	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 3:12:13 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 3:12:13 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 3:12:13 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 3:12:13 PM	41702
Surr: 2-Fluorophenol	1.00	0	15-74.1	S	%Rec	1	12/13/2018 3:12:13 PM	41702
Surr: Phenol-d5	25.8	0	15-59.8		%Rec	1	12/13/2018 3:12:13 PM	41702
Surr: 2,4,6-Tribromophenol	76.2	0	22.1-112		%Rec	1	12/13/2018 3:12:13 PM	41702
Surr: Nitrobenzene-d5	44.2	0	33.2-94		%Rec	1	12/13/2018 3:12:13 PM	41702
Surr: 2-Fluorobiphenyl	44.0	0	34-90.9		%Rec	1	12/13/2018 3:12:13 PM	41702
Surr: 4-Terphenyl-d14	58.0	0	15-149		%Rec	1	12/13/2018 3:12:13 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	35	200		µg/L	200	11/28/2018 4:12:00 PM	R55932
Toluene	1900	3.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Ethylbenzene	1900	4.5	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Methyl tert-butyl ether (MTBE)	10	9.1	20	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2,4-Trimethylbenzene	1100	5.1	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,3,5-Trimethylbenzene	250	4.6	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Naphthalene	230	5.8	40		µg/L	20	11/28/2018 4:36:00 PM	R55932
1-Methylnaphthalene	68	6.7	80	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
2-Methylnaphthalene	87	6.9	80		µg/L	20	11/28/2018 4:36:00 PM	R55932
Acetone	ND	15	200		µg/L	20	11/28/2018 4:36:00 PM	R55932
Bromobenzene	ND	6.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Bromodichloromethane	ND	5.7	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Bromoform	ND	6.5	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Bromomethane	ND	5.5	60		µg/L	20	11/28/2018 4:36:00 PM	R55932
2-Butanone	ND	28	200		µg/L	20	11/28/2018 4:36:00 PM	R55932
Carbon disulfide	ND	7.7	200		µg/L	20	11/28/2018 4:36:00 PM	R55932
Carbon Tetrachloride	ND	2.7	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Chlorobenzene	ND	5.8	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Chloroethane	73	3.3	40		µg/L	20	11/28/2018 4:36:00 PM	R55932
Chloroform	ND	4.7	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Chloromethane	ND	6.4	60		µg/L	20	11/28/2018 4:36:00 PM	R55932
2-Chlorotoluene	ND	5.0	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
4-Chlorotoluene	ND	5.6	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
cis-1,2-DCE	58	7.5	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	11/28/2018 4:36:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Dibromomethane	ND	6.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1-Dichloroethane	ND	3.5	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1-Dichloroethene	5.1	2.4	20	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2-Dichloropropane	ND	3.3	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,3-Dichloropropane	ND	5.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
2,2-Dichloropropane	ND	4.7	40		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1-Dichloropropene	ND	3.3	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Hexachlorobutadiene	ND	7.8	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
2-Hexanone	ND	18	200		µg/L	20	11/28/2018 4:36:00 PM	R55932
Isopropylbenzene	60	4.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
4-Isopropyltoluene	8.2	4.8	20	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	11/28/2018 4:36:00 PM	R55932
Methylene Chloride	ND	4.1	60		µg/L	20	11/28/2018 4:36:00 PM	R55932
n-Butylbenzene	14	5.0	60	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
n-Propylbenzene	140	4.9	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
sec-Butylbenzene	12	4.0	20	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
Styrene	ND	5.0	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
tert-Butylbenzene	ND	4.4	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	11/28/2018 4:36:00 PM	R55932
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
trans-1,2-DCE	ND	3.6	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
Trichlorofluoromethane	ND	2.9	20		µg/L	20	11/28/2018 4:36:00 PM	R55932
1,2,3-Trichloropropane	ND	11	40		µg/L	20	11/28/2018 4:36:00 PM	R55932
Vinyl chloride	7.4	2.4	20	J	µg/L	20	11/28/2018 4:36:00 PM	R55932
Xylenes, Total	8000	130	300		µg/L	200	11/28/2018 4:12:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	20	11/28/2018 4:36:00 PM	R55932
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	20	11/28/2018 4:36:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-10
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:49:00 AM
Lab ID: 1811A96-005
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	93.1	0	70-130		%Rec	20	11/28/2018 4:36:00 PM	R55932
Surr: Toluene-d8	96.1	0	70-130		%Rec	20	11/28/2018 4:36:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	11	0.63	1.0		mg/L	1	11/28/2018 6:57:57 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 6:57:57 PM	41699
Surr: DNOP	122	0	76.7-135		%Rec	1	11/28/2018 6:57:57 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.25	0.024	0.050		mg/L	1	11/27/2018 2:54:46 AM	G55859
Surr: BFB	252	0	72.8-125	S	%Rec	1	11/27/2018 2:54:46 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 9:05:53 PM	R55800
Chloride	1900	100	100		mg/L	200	11/29/2018 1:27:23 AM	A55924
Nitrogen, Nitrite (As N)	0.72	0.10	2.0	J	mg/L	20	11/20/2018 9:18:45 PM	R55800
Bromide	0.78	0.10	0.50		mg/L	5	11/20/2018 9:05:53 PM	R55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 9:05:53 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 9:05:53 PM	R55800
Sulfate	ND	0.63	2.5		mg/L	5	11/20/2018 9:05:53 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	13	0.049	0.10	*	mg/L	50	12/29/2018 1:04:12 PM	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 1:00:08 PM	A56663
Calcium	190	0.39	5.0		mg/L	5	12/29/2018 1:02:12 PM	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 1:00:08 PM	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 1:00:08 PM	A56663
Iron	10	0.82	1.0	*	mg/L	50	12/29/2018 1:04:12 PM	A56663
Magnesium	61	0.25	1.0		mg/L	1	12/29/2018 1:00:08 PM	A56663
Manganese	2.3	0.0020	0.010	*	mg/L	5	12/29/2018 1:02:12 PM	A56663
Potassium	4.9	0.11	1.0		mg/L	1	12/29/2018 1:00:08 PM	A56663
Silver	0.0077	0.0018	0.0050		mg/L	1	12/29/2018 1:00:08 PM	A56663
Sodium	1100	8.2	50		mg/L	50	12/29/2018 1:04:12 PM	A56663
Zinc	0.021	0.0021	0.010		mg/L	1	12/29/2018 1:00:08 PM	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	13	0.020	0.040	*	mg/L	20	12/13/2018 2:11:14 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 5:14:18 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 5:14:18 PM	41783
Copper	0.0057	0.0041	0.0060	J	mg/L	1	12/11/2018 5:14:18 PM	41783
Iron	12	0.20	0.40	*	mg/L	20	12/13/2018 2:11:14 PM	41783
Manganese	2.6	0.0055	0.010	*	mg/L	5	12/11/2018 5:16:26 PM	41783
Silver	0.0052	0.0012	0.0050		mg/L	1	12/11/2018 5:14:18 PM	41783
Zinc	0.011	0.0033	0.010		mg/L	1	12/11/2018 5:14:18 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	12/4/2018 2:53:33 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:53:33 PM	B56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 2:53:33 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0021	0.00041	0.0010		mg/L	1	12/5/2018 4:11:04 PM	41783
Lead	0.0044	0.00023	0.00050		mg/L	1	12/5/2018 4:11:04 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:11:04 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:50:30 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 3:41:17 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Carbazole	8.9	6.3	10	J	µg/L	1	12/13/2018 3:41:17 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 3:41:17 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 3:41:17 PM	41702
1-Methylnaphthalene	39	7.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Methylnaphthalene	13	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Methylphenol	ND	6.3	10		µg/L	1	12/13/2018 3:41:17 PM	41702
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 3:41:17 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Naphthalene	20	5.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 3:41:17 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 3:41:17 PM	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Phenol	ND	6.0	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 3:41:17 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 3:41:17 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 3:41:17 PM	41702
Surr: 2-Fluorophenol	38.6	0	15-74.1		%Rec	1	12/13/2018 3:41:17 PM	41702
Surr: Phenol-d5	26.9	0	15-59.8		%Rec	1	12/13/2018 3:41:17 PM	41702
Surr: 2,4,6-Tribromophenol	62.9	0	22.1-112		%Rec	1	12/13/2018 3:41:17 PM	41702
Surr: Nitrobenzene-d5	54.2	0	33.2-94		%Rec	1	12/13/2018 3:41:17 PM	41702
Surr: 2-Fluorobiphenyl	43.2	0	34-90.9		%Rec	1	12/13/2018 3:41:17 PM	41702
Surr: 4-Terphenyl-d14	47.4	0	15-149		%Rec	1	12/13/2018 3:41:17 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8.4	0.17	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Toluene	0.65	0.17	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
Ethylbenzene	30	0.22	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2,4-Trimethylbenzene	1.4	0.25	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Naphthalene	66	0.29	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1-Methylnaphthalene	110	3.4	40		µg/L	10	11/29/2018 12:56:00 P	R55969
2-Methylnaphthalene	53	0.35	4.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Acetone	ND	0.76	10		µg/L	1	11/28/2018 5:00:00 PM	R55932
Bromobenzene	ND	0.32	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Bromoform	ND	0.32	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Bromomethane	ND	0.27	3.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
2-Butanone	ND	1.4	10		µg/L	1	11/28/2018 5:00:00 PM	R55932
Carbon disulfide	ND	0.39	10		µg/L	1	11/28/2018 5:00:00 PM	R55932
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Chloroethane	ND	0.16	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Chloroform	ND	0.24	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Chloromethane	ND	0.32	3.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
cis-1,2-DCE	0.47	0.38	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Dibromomethane	ND	0.32	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1-Dichloroethane	0.63	0.18	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1-Dichloroethene	0.22	0.12	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
2-Hexanone	ND	0.91	10		µg/L	1	11/28/2018 5:00:00 PM	R55932
Isopropylbenzene	14	0.22	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
4-Isopropyltoluene	0.36	0.24	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/28/2018 5:00:00 PM	R55932
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
n-Butylbenzene	4.8	0.25	3.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
n-Propylbenzene	19	0.24	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
sec-Butylbenzene	10	0.20	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Styrene	ND	0.25	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
tert-Butylbenzene	0.38	0.22	1.0	J	µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Vinyl chloride	1.1	0.12	1.0		µg/L	1	11/28/2018 5:00:00 PM	R55932
Xylenes, Total	3.9	0.64	1.5		µg/L	1	11/28/2018 5:00:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	97.7	0	70-130		%Rec	1	11/28/2018 5:00:00 PM	R55932
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	11/28/2018 5:00:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-39
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:22:00 AM
Lab ID: 1811A96-006
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	91.1	0	70-130		%Rec	1	11/28/2018 5:00:00 PM	R55932
Surr: Toluene-d8	96.9	0	70-130		%Rec	1	11/28/2018 5:00:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/28/2018 7:20:07 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 7:20:07 PM	41699
Surr: DNOP	116	0	76.7-135		%Rec	1	11/28/2018 7:20:07 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.13	0.024	0.050		mg/L	1	11/27/2018 3:39:39 AM	G55859
Surr: BFB	81.8	0	72.8-125		%Rec	1	11/27/2018 3:39:39 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.81	0.50	0.50		mg/L	5	11/20/2018 9:31:37 PM	R55800
Chloride	240	10	10		mg/L	20	11/20/2018 9:44:29 PM	R55800
Nitrogen, Nitrite (As N)	0.21	0.025	0.50	J	mg/L	5	11/20/2018 9:31:37 PM	R55800
Bromide	1.0	0.10	0.50		mg/L	5	11/20/2018 9:31:37 PM	R55800
Nitrogen, Nitrate (As N)	5.9	0.25	0.50		mg/L	5	11/20/2018 9:31:37 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 9:31:37 PM	R55800
Sulfate	400	2.5	10		mg/L	20	11/20/2018 9:44:29 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.052	0.00099	0.0020		mg/L	1	12/29/2018 1:06:29 PM	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 1:06:29 PM	A56663
Calcium	160	0.78	10		mg/L	10	12/29/2018 1:08:41 PM	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 1:06:29 PM	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 1:06:29 PM	A56663
Iron	ND	0.016	0.020		mg/L	1	12/29/2018 1:06:29 PM	A56663
Magnesium	30	0.25	1.0		mg/L	1	12/29/2018 1:06:29 PM	A56663
Manganese	2.7	0.0039	0.020	*	mg/L	10	12/29/2018 1:08:41 PM	A56663
Potassium	0.69	0.11	1.0	J	mg/L	1	12/29/2018 1:06:29 PM	A56663
Silver	0.0034	0.0018	0.0050	J	mg/L	1	12/29/2018 1:06:29 PM	A56663
Sodium	330	1.6	10		mg/L	10	12/29/2018 1:08:41 PM	A56663
Zinc	0.031	0.0021	0.010		mg/L	1	12/29/2018 1:06:29 PM	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.063	0.0010	0.0020		mg/L	1	12/11/2018 5:18:32 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 5:18:32 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 5:18:32 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 5:18:32 PM	41783
Iron	0.23	0.010	0.020		mg/L	1	12/11/2018 5:18:32 PM	41783
Manganese	2.8	0.0055	0.010	*	mg/L	5	12/11/2018 5:20:46 PM	41783
Silver	0.0056	0.0012	0.0050		mg/L	1	12/11/2018 5:18:32 PM	41783
Zinc	ND	0.0033	0.010		mg/L	1	12/11/2018 5:18:32 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00070	0.00042	0.0010	J	mg/L	1	12/4/2018 2:55:58 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:55:58 PM	B56062
Selenium	0.0017	0.00076	0.0010		mg/L	1	12/4/2018 2:55:58 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0015	0.00041	0.0010		mg/L	1	12/5/2018 4:13:00 PM	41783
Lead	0.00028	0.00023	0.00050	J	mg/L	1	12/5/2018 4:13:00 PM	41783
Selenium	0.0019	0.00098	0.0010		mg/L	1	12/5/2018 4:13:00 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:52:43 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Acenaphthylene	ND	62	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Aniline	ND	62	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Anthracene	ND	57	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Azobenzene	ND	67	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benz(a)anthracene	ND	53	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzo(a)pyrene	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzoic acid	ND	63	200	D	µg/L	10	12/16/2018 12:00:36 P	41702
Benzyl alcohol	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Carbazole	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Chloroaniline	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Chloronaphthalene	ND	61	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Chlorophenol	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Chrysene	ND	68	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	12/16/2018 12:00:36 P	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	69	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Diethyl phthalate	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Dimethyl phthalate	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Fluoranthene	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Fluorene	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Hexachlorobenzene	ND	62	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Hexachlorobutadiene	ND	64	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Hexachloroethane	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Isophorone	ND	62	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
1-Methylnaphthalene	ND	70	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Methylnaphthalene	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Methylphenol	ND	63	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
3+4-Methylphenol	ND	54	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Naphthalene	ND	50	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Nitroaniline	ND	59	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
3-Nitroaniline	ND	68	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Nitroaniline	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Nitrobenzene	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2-Nitrophenol	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
4-Nitrophenol	ND	56	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Pentachlorophenol	ND	53	200	D	µg/L	10	12/16/2018 12:00:36 P	41702
Phenanthrene	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Phenol	ND	60	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Pyrene	ND	65	100	D	µg/L	10	12/16/2018 12:00:36 P	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	54	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	12/16/2018 12:00:36 P	41702
Surr: 2-Fluorophenol	45.8	0	15-74.1	D	%Rec	10	12/16/2018 12:00:36 P	41702
Surr: Phenol-d5	33.4	0	15-59.8	D	%Rec	10	12/16/2018 12:00:36 P	41702
Surr: 2,4,6-Tribromophenol	87.1	0	22.1-112	D	%Rec	10	12/16/2018 12:00:36 P	41702
Surr: Nitrobenzene-d5	64.8	0	33.2-94	D	%Rec	10	12/16/2018 12:00:36 P	41702
Surr: 2-Fluorobiphenyl	76.2	0	34-90.9	D	%Rec	10	12/16/2018 12:00:36 P	41702
Surr: 4-Terphenyl-d14	73.4	0	15-149	D	%Rec	10	12/16/2018 12:00:36 P	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.2	0.17	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Toluene	53	0.17	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Ethylbenzene	0.23	0.22	1.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
Methyl tert-butyl ether (MTBE)	0.66	0.46	1.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Naphthalene	0.94	0.29	2.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
1-Methylnaphthalene	3.0	0.34	4.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
2-Methylnaphthalene	1.3	0.35	4.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
Acetone	ND	0.76	10		µg/L	1	11/28/2018 5:24:00 PM	R55932
Bromobenzene	ND	0.32	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Bromoform	ND	0.32	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Bromomethane	ND	0.27	3.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
2-Butanone	ND	1.4	10		µg/L	1	11/28/2018 5:24:00 PM	R55932
Carbon disulfide	ND	0.39	10		µg/L	1	11/28/2018 5:24:00 PM	R55932
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Chloroethane	ND	0.16	2.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Chloroform	0.31	0.24	1.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
Chloromethane	ND	0.32	3.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/28/2018 5:24:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Dibromomethane	ND	0.32	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1-Dichloroethane	0.23	0.18	1.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
2-Hexanone	ND	0.91	10		µg/L	1	11/28/2018 5:24:00 PM	R55932
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/28/2018 5:24:00 PM	R55932
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Styrene	ND	0.25	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Tetrachloroethene (PCE)	0.43	0.15	1.0	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/28/2018 5:24:00 PM	R55932
Xylenes, Total	0.77	0.64	1.5	J	µg/L	1	11/28/2018 5:24:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	1	11/28/2018 5:24:00 PM	R55932
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/28/2018 5:24:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-38
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 9:48:00 AM
Lab ID: 1811A96-007
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	97.1	0	70-130		%Rec	1	11/28/2018 5:24:00 PM	R55932
Surr: Toluene-d8	93.7	0	70-130		%Rec	1	11/28/2018 5:24:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008 **Matrix:** AQUEOUS **Received Date:** 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.7	0.63	1.0		mg/L	1	11/28/2018 7:42:03 PM	41699
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/28/2018 7:42:03 PM	41699
Surr: DNOP	120	0	76.7-135		%Rec	1	11/28/2018 7:42:03 PM	41699
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	53	2.4	5.0		mg/L	100	11/27/2018 11:29:55 A	G55885
Surr: BFB	102	0	72.8-125		%Rec	100	11/27/2018 11:29:55 A	G55885
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 9:57:20 PM	R55800
Chloride	320	10	10		mg/L	20	11/20/2018 10:10:12 P	R55800
Nitrogen, Nitrite (As N)	0.12	0.025	0.50	J	mg/L	5	11/20/2018 9:57:20 PM	R55800
Bromide	0.64	0.10	0.50		mg/L	5	11/20/2018 9:57:20 PM	R55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 9:57:20 PM	R55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 9:57:20 PM	R55800
Sulfate	ND	0.63	2.5		mg/L	5	11/20/2018 9:57:20 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.1	0.0049	0.010	*	mg/L	5	12/29/2018 1:20:01 PM	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 1:17:56 PM	A56663
Calcium	130	0.39	5.0		mg/L	5	12/29/2018 1:20:01 PM	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 1:17:56 PM	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 1:17:56 PM	A56663
Iron	6.2	0.16	0.20	*	mg/L	10	1/3/2019 7:31:08 PM	B56770
Magnesium	31	0.25	1.0		mg/L	1	12/29/2018 1:17:56 PM	A56663
Manganese	2.9	0.0020	0.010	*	mg/L	5	12/29/2018 1:20:01 PM	A56663
Potassium	0.55	0.11	1.0	J	mg/L	1	12/29/2018 1:17:56 PM	A56663
Silver	0.0020	0.0018	0.0050	J	mg/L	1	12/29/2018 1:17:56 PM	A56663
Sodium	280	0.82	5.0		mg/L	5	12/29/2018 1:20:01 PM	A56663
Zinc	0.023	0.0021	0.010		mg/L	1	12/29/2018 1:17:56 PM	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.3	0.0050	0.010	*	mg/L	5	12/11/2018 5:25:17 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 5:23:04 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 5:23:04 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 5:23:04 PM	41783
Iron	8.8	0.10	0.20	*	mg/L	10	12/13/2018 2:13:09 PM	41783
Manganese	3.0	0.0055	0.010	*	mg/L	5	12/11/2018 5:25:17 PM	41783
Silver	0.0034	0.0012	0.0050	J	mg/L	1	12/11/2018 5:23:04 PM	41783
Zinc	0.0052	0.0033	0.010	J	mg/L	1	12/11/2018 5:23:04 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0080	0.00042	0.0010		mg/L	1	12/4/2018 2:58:23 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 2:58:23 PM	B56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 2:58:23 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.011	0.00041	0.0010	*	mg/L	1	12/5/2018 4:14:56 PM	41783
Lead	0.00087	0.00023	0.00050		mg/L	1	12/5/2018 4:14:56 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:14:56 PM	41783
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 12:54:56 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 4:40:10 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Bis(2-ethylhexyl)phthalate	13	8.1	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Carbazole	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 4:40:10 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4-Dimethylphenol	17	5.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 4:40:10 PM	41702
1-Methylnaphthalene	36	7.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Methylnaphthalene	56	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Methylphenol	11	6.3	10		µg/L	1	12/13/2018 4:40:10 PM	41702
3+4-Methylphenol	9.0	5.4	10	J	µg/L	1	12/13/2018 4:40:10 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 4:40:10 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Naphthalene	110	5.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 4:40:10 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 4:40:10 PM	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Phenol	34	6.0	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 4:40:10 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 4:40:10 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 4:40:10 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 4:40:10 PM	41702
Surr: 2-Fluorophenol	1.33	0	15-74.1	S	%Rec	1	12/13/2018 4:40:10 PM	41702
Surr: Phenol-d5	28.1	0	15-59.8		%Rec	1	12/13/2018 4:40:10 PM	41702
Surr: 2,4,6-Tribromophenol	79.9	0	22.1-112		%Rec	1	12/13/2018 4:40:10 PM	41702
Surr: Nitrobenzene-d5	49.3	0	33.2-94		%Rec	1	12/13/2018 4:40:10 PM	41702
Surr: 2-Fluorobiphenyl	56.8	0	34-90.9		%Rec	1	12/13/2018 4:40:10 PM	41702
Surr: 4-Terphenyl-d14	60.9	0	15-149		%Rec	1	12/13/2018 4:40:10 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	35	200		µg/L	200	11/28/2018 5:48:00 PM	R55932
Toluene	1700	3.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Ethylbenzene	1800	4.5	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Methyl tert-butyl ether (MTBE)	ND	9.1	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2,4-Trimethylbenzene	1100	5.1	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,3,5-Trimethylbenzene	250	4.6	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Naphthalene	220	5.8	40		µg/L	20	11/28/2018 6:12:00 PM	R55932
1-Methylnaphthalene	70	6.7	80	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
2-Methylnaphthalene	85	6.9	80		µg/L	20	11/28/2018 6:12:00 PM	R55932
Acetone	ND	15	200		µg/L	20	11/28/2018 6:12:00 PM	R55932
Bromobenzene	ND	6.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Bromodichloromethane	ND	5.7	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Bromoform	ND	6.5	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Bromomethane	ND	5.5	60		µg/L	20	11/28/2018 6:12:00 PM	R55932
2-Butanone	ND	28	200		µg/L	20	11/28/2018 6:12:00 PM	R55932
Carbon disulfide	ND	7.7	200		µg/L	20	11/28/2018 6:12:00 PM	R55932
Carbon Tetrachloride	ND	2.7	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Chlorobenzene	ND	5.8	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Chloroethane	70	3.3	40		µg/L	20	11/28/2018 6:12:00 PM	R55932
Chloroform	ND	4.7	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Chloromethane	ND	6.4	60		µg/L	20	11/28/2018 6:12:00 PM	R55932
2-Chlorotoluene	ND	5.0	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
4-Chlorotoluene	ND	5.6	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
cis-1,2-DCE	58	7.5	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	11/28/2018 6:12:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Dibromomethane	ND	6.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1-Dichloroethane	ND	3.5	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1-Dichloroethene	5.0	2.4	20	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2-Dichloropropane	ND	3.3	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,3-Dichloropropane	ND	5.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
2,2-Dichloropropane	ND	4.7	40		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1-Dichloropropene	ND	3.3	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Hexachlorobutadiene	ND	7.8	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
2-Hexanone	ND	18	200		µg/L	20	11/28/2018 6:12:00 PM	R55932
Isopropylbenzene	58	4.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
4-Isopropyltoluene	8.4	4.8	20	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	11/28/2018 6:12:00 PM	R55932
Methylene Chloride	ND	4.1	60		µg/L	20	11/28/2018 6:12:00 PM	R55932
n-Butylbenzene	14	5.0	60	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
n-Propylbenzene	140	4.9	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
sec-Butylbenzene	12	4.0	20	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
Styrene	ND	5.0	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
tert-Butylbenzene	ND	4.4	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	11/28/2018 6:12:00 PM	R55932
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
trans-1,2-DCE	ND	3.6	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
Trichlorofluoromethane	ND	2.9	20		µg/L	20	11/28/2018 6:12:00 PM	R55932
1,2,3-Trichloropropane	ND	11	40		µg/L	20	11/28/2018 6:12:00 PM	R55932
Vinyl chloride	6.9	2.4	20	J	µg/L	20	11/28/2018 6:12:00 PM	R55932
Xylenes, Total	7800	130	300		µg/L	200	11/28/2018 5:48:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	99.0	0	70-130		%Rec	20	11/28/2018 6:12:00 PM	R55932
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	11/28/2018 6:12:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 8:58:00 AM
Lab ID: 1811A96-008
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	92.3	0	70-130		%Rec	20	11/28/2018 6:12:00 PM	R55932
Surr: Toluene-d8	89.9	0	70-130		%Rec	20	11/28/2018 6:12:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 10:30:00 AM
Lab ID: 1811A96-009
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 11:14:39 P	A55800
Chloride	34	2.5	2.5		mg/L	5	11/20/2018 11:14:39 P	A55800
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/20/2018 11:14:39 P	A55800
Bromide	0.15	0.10	0.50	J	mg/L	5	11/20/2018 11:14:39 P	A55800
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/20/2018 11:14:39 P	A55800
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/20/2018 11:14:39 P	A55800
Sulfate	720	2.5	10		mg/L	20	11/20/2018 11:27:30 P	A55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.010	0.00099	0.0020		mg/L	1	12/29/2018 1:22:00 PM	A56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 1:22:00 PM	A56663
Calcium	250	0.78	10		mg/L	10	12/29/2018 1:24:15 PM	A56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 1:22:00 PM	A56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 1:22:00 PM	A56663
Iron	0.028	0.016	0.020		mg/L	1	12/29/2018 1:22:00 PM	A56663
Magnesium	49	0.25	1.0		mg/L	1	12/29/2018 1:22:00 PM	A56663
Manganese	0.0011	0.00039	0.0020	J	mg/L	1	12/29/2018 1:22:00 PM	A56663
Potassium	1.5	0.11	1.0		mg/L	1	12/29/2018 1:22:00 PM	A56663
Silver	0.0050	0.0018	0.0050		mg/L	1	12/29/2018 1:22:00 PM	A56663
Sodium	65	0.16	1.0		mg/L	1	12/29/2018 1:22:00 PM	A56663
Zinc	0.028	0.0021	0.010		mg/L	1	12/29/2018 1:22:00 PM	A56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.011	0.0010	0.0020		mg/L	1	12/11/2018 5:27:22 PM	41783
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 5:27:22 PM	41783
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 5:27:22 PM	41783
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 5:27:22 PM	41783
Iron	0.031	0.010	0.020		mg/L	1	12/11/2018 5:27:22 PM	41783
Manganese	0.0011	0.0011	0.0020	J	mg/L	1	12/11/2018 5:27:22 PM	41783
Silver	0.0088	0.0012	0.0050		mg/L	1	12/11/2018 5:27:22 PM	41783
Zinc	0.0037	0.0033	0.010	J	mg/L	1	12/11/2018 5:27:22 PM	41783
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0037	0.00042	0.0010		mg/L	1	12/4/2018 3:05:39 PM	B56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:05:39 PM	B56062
Selenium	0.00076	0.00076	0.0010	J	mg/L	1	12/4/2018 3:05:39 PM	B56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0049	0.00041	0.0010		mg/L	1	12/5/2018 4:16:52 PM	41783
Lead	ND	0.00023	0.00050		mg/L	1	12/5/2018 4:16:52 PM	41783
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:16:52 PM	41783

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 10:30:00 AM
Lab ID: 1811A96-009
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/7/2018 1:01:46 PM	41958
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Acenaphthylene	ND	6.2	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Aniline	ND	6.2	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Anthracene	ND	5.7	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Azobenzene	ND	6.7	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzoic acid	ND	6.3	20		µg/L	1	12/13/2018 5:09:27 PM	41702
Benzyl alcohol	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Carbazole	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Chloroaniline	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Chlorophenol	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Chrysene	ND	6.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Dibenzofuran	ND	6.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Diethyl phthalate	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 10:30:00 AM
Lab ID: 1811A96-009
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Fluoranthene	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Fluorene	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Hexachloroethane	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Isophorone	ND	6.2	10		µg/L	1	12/13/2018 5:09:27 PM	41702
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Methylphenol	ND	6.3	10		µg/L	1	12/13/2018 5:09:27 PM	41702
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/13/2018 5:09:27 PM	41702
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Naphthalene	ND	5.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Nitroaniline	ND	5.9	10		µg/L	1	12/13/2018 5:09:27 PM	41702
3-Nitroaniline	ND	6.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Nitroaniline	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Nitrobenzene	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2-Nitrophenol	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
4-Nitrophenol	ND	5.6	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Pentachlorophenol	ND	5.3	20		µg/L	1	12/13/2018 5:09:27 PM	41702
Phenanthrene	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Phenol	ND	6.0	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Pyrene	ND	6.5	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Pyridine	ND	5.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/13/2018 5:09:27 PM	41702
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/13/2018 5:09:27 PM	41702
Surr: 2-Fluorophenol	37.1	0	15-74.1		%Rec	1	12/13/2018 5:09:27 PM	41702
Surr: Phenol-d5	27.4	0	15-59.8		%Rec	1	12/13/2018 5:09:27 PM	41702
Surr: 2,4,6-Tribromophenol	65.0	0	22.1-112		%Rec	1	12/13/2018 5:09:27 PM	41702
Surr: Nitrobenzene-d5	49.6	0	33.2-94		%Rec	1	12/13/2018 5:09:27 PM	41702
Surr: 2-Fluorobiphenyl	44.0	0	34-90.9		%Rec	1	12/13/2018 5:09:27 PM	41702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 10:30:00 AM
Lab ID: 1811A96-009
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Surr: 4-Terphenyl-d14	60.2	0	15-149		%Rec	1	12/13/2018 5:09:27 PM	41702
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.62	0.17	1.0	J	µg/L	1	11/28/2018 6:36:00 PM	R55932
Toluene	ND	0.17	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Naphthalene	ND	0.29	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Acetone	27	0.76	10		µg/L	1	11/28/2018 6:36:00 PM	R55932
Bromobenzene	ND	0.32	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Bromoform	ND	0.32	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Bromomethane	ND	0.27	3.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
2-Butanone	ND	1.4	10		µg/L	1	11/28/2018 6:36:00 PM	R55932
Carbon disulfide	ND	0.39	10		µg/L	1	11/28/2018 6:36:00 PM	R55932
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Chloroethane	ND	0.16	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Chloroform	ND	0.24	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Chloromethane	ND	0.32	3.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Dibromomethane	ND	0.32	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: PW-3
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/20/2018 10:30:00 AM
Lab ID: 1811A96-009
Matrix: AQUEOUS
Received Date: 11/20/2018 1:30:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
2-Hexanone	ND	0.91	10		µg/L	1	11/28/2018 6:36:00 PM	R55932
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/28/2018 6:36:00 PM	R55932
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Styrene	ND	0.25	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/28/2018 6:36:00 PM	R55932
Xylenes, Total	0.82	0.64	1.5	J	µg/L	1	11/28/2018 6:36:00 PM	R55932
Surr: 1,2-Dichloroethane-d4	97.3	0	70-130		%Rec	1	11/28/2018 6:36:00 PM	R55932
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	11/28/2018 6:36:00 PM	R55932
Surr: Dibromofluoromethane	94.5	0	70-130		%Rec	1	11/28/2018 6:36:00 PM	R55932
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	11/28/2018 6:36:00 PM	R55932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 4500CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	ND		0.00500	1	11/29/2018 15:45	WG1202804

Method Blank (MB)

(MB) R3364056-1 11/29/18 15:27

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00130	0.00500

L1047273-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1047273-10 11/29/18 15:33 • (DUP) R3364056-3 11/29/18 15:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	0.00626	0.00456	1	29.3	J3	20

L1047677-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1047677-01 11/29/18 15:53 • (DUP) R3364056-6 11/29/18 15:54

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3364056-2 11/29/18 15:28

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.106	106	85.0-115	

L1047279-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047279-02 11/29/18 15:35 • (MS) R3364056-4 11/29/18 15:36 • (MSD) R3364056-5 11/29/18 15:39

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.104	0.103	104	103	1	75.0-125			0.965	20

L1047677-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047677-02 11/29/18 15:55 • (MS) R3364056-7 11/29/18 15:56 • (MSD) R3364056-8 11/29/18 15:57

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.0952	0.0950	95.2	95.0	1	75.0-125			0.210	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895971** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Calcium	50	1.0	50.00	0	99.4	85	115			
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.8	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			
Magnesium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	49	1.0	50.00	0	98.3	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.47	0.010	0.5000	0	94.8	85	115			

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0017	0.0020	0.002000	0	87.1	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	99.1	50	150			J
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895972** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.2	50	150			J
Iron	0.022	0.020	0.02000	0	111	50	150			
Magnesium	0.50	1.0	0.5000	0	101	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.53	1.0	0.5000	0	107	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.4	50	150			J
Sodium	0.46	1.0	0.5000	0	91.5	50	150			J
Zinc	0.0052	0.010	0.005000	0	105	50	150			J

Sample ID **1811A96-003FMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-4**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1896016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	95.8	70	130			
Chromium	0.46	0.0060	0.5000	0	91.6	70	130			
Copper	0.49	0.0060	0.5000	0	97.9	70	130			
Magnesium	75	1.0	50.00	28.00	93.6	70	130			
Potassium	49	1.0	50.00	0.6785	95.7	70	130			
Silver	0.087	0.0050	0.1000	0.002270	85.2	70	130			
Zinc	0.49	0.010	0.5000	0.02862	91.8	70	130			

Sample ID **1811A96-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-4**	Batch ID: **A56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1896017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	97.2	70	130	1.46	20	
Chromium	0.47	0.0060	0.5000	0	93.1	70	130	1.62	20	
Copper	0.50	0.0060	0.5000	0	99.6	70	130	1.70	20	
Magnesium	77	1.0	50.00	28.00	98.6	70	130	3.23	20	
Potassium	49	1.0	50.00	0.6785	96.9	70	130	1.26	20	
Silver	0.078	0.0050	0.1000	0.002270	76.0	70	130	11.1	20	
Zinc	0.50	0.010	0.5000	0.02862	93.9	70	130	2.15	20	

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56770**	RunNo: **56770**
Prep Date:	Analysis Date: **1/3/2019**	SeqNo: **1899697** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-B**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID: **B56770**			RunNo: **56770**					
Prep Date:		Analysis Date: **1/3/2019**			SeqNo: **1899697**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LCS-B**	SampType: **LCS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID: **B56770**			RunNo: **56770**					
Prep Date:		Analysis Date: **1/3/2019**			SeqNo: **1899698**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.51	0.020	0.5000	0	102	85	115			

Sample ID	**LLLCS-B**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B56770**			RunNo: **56770**					
Prep Date:		Analysis Date: **1/3/2019**			SeqNo: **1899699**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.022	0.020	0.02000	0	111	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-41783**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41783**	RunNo: **56108**
Prep Date: **11/29/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874273** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-41783**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41783**	RunNo: **56108**
Prep Date: **11/29/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874274** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.6	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID **LLLCS-41783**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41783**	RunNo: **56108**
Prep Date: **11/29/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874275** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0019	0.0020	0.002000	0	93.3	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			
Copper	0.0060	0.0060	0.006000	0	99.8	50	150			J
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0024	0.0020	0.002000	0	120	50	150			
Silver	0.0046	0.0050	0.005000	0	93.0	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LLLCS-41783**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**41783**		RunNo:	**56108**					
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874285**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc		0.0072	0.010	0.005000	0	144	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872857** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872858** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	97.2	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.1	50	150			J
Selenium	0.00089	0.0010	0.001000	0	88.6	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.8	85	115			
Lead	0.012	0.00050	0.01250	0	98.1	85	115			
Selenium	0.024	0.0010	0.02500	0	94.3	85	115			

Sample ID **1811A96-004EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-11**	Batch ID: **B56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872868** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.035	0.0010	0.02500	0.009757	99.8	70	130			
Lead	0.011	0.00050	0.01250	0	87.1	70	130			
Selenium	0.023	0.0010	0.02500	0	93.3	70	130			

Sample ID **1811A96-004EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **MKTF-11**	Batch ID: **B56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872869** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.035	0.0010	0.02500	0.009757	102	70	130	1.30	20	
Lead	0.011	0.00050	0.01250	0	87.8	70	130	0.859	20	
Selenium	0.024	0.0010	0.02500	0	94.4	70	130	1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41783**	SampType: **MBLK**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**PBW**	Batch ID: **41783**		RunNo: **56099**						
Prep Date:	**11/29/2018**	Analysis Date: **12/5/2018**		SeqNo: **1873832**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Lead		ND	0.00050								
Selenium		ND	0.0010								

Sample ID	**MSLLLCS-41783**	SampType: **LCSLL**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**BatchQC**	Batch ID: **41783**		RunNo: **56099**						
Prep Date:	**11/29/2018**	Analysis Date: **12/5/2018**		SeqNo: **1873833**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.0011	0.0010	0.001000	0	106	50	150			
Lead		0.00051	0.00050	0.0005000	0	102	50	150			
Selenium		0.00098	0.0010	0.001000	0	97.8	50	150			J

Sample ID	**MSLCS-41783**	SampType: **LCS**		TestCode: **200.8 ICPMS Metals:Total**						
Client ID:	**LCSW**	Batch ID: **41783**		RunNo: **56099**						
Prep Date:	**11/29/2018**	Analysis Date: **12/5/2018**		SeqNo: **1873834**		Units: **mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.027	0.0010	0.02500	0	109	85	115			
Lead		0.013	0.00050	0.01250	0	107	85	115			
Selenium		0.026	0.0010	0.02500	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41958**	SampType: **MBLK**		TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **41958**		RunNo: **56165**					
Prep Date:	**12/6/2018**	Analysis Date: **12/7/2018**		SeqNo: **1876122**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-41958**	SampType: **LCS**		TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **41958**		RunNo: **56165**					
Prep Date:	**12/6/2018**	Analysis Date: **12/7/2018**		SeqNo: **1876123**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.9	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.5	90	110			
Bromide	2.5	0.10	2.500	0	98.8	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.4	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860511** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860512** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.4	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.5	90	110			
Bromide	2.5	0.10	2.500	0	98.8	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.1	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A55924**	RunNo: **55924**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A55924**	RunNo: **55924**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41772**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41772**	RunNo:	**55977**					
Prep Date:	**11/29/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1868977**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41772**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41772**	RunNo:	**55977**					
Prep Date:	**11/29/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1868978**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.074	0.010	0.1000	0	74.1	70	130			

Sample ID	**LCSD-41772**	SampType:	**LCSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSS02**	Batch ID:	**41772**	RunNo:	**55977**					
Prep Date:	**11/29/2018**	Analysis Date:	**11/29/2018**	SeqNo:	**1868979**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.083	0.010	0.1000	0	82.8	70	130	11.0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-41699**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	76.7	135			

Sample ID **LCS-41699**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866057** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	99.7	70	130			
Surr: DNOP	0.56		0.5000		112	76.7	135			

Sample ID **1811A96-003BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-4**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.8	1.0	5.000	4.512	106	82.8	143			
Surr: DNOP	0.56		0.5000		113	76.7	135			

Sample ID **1811A96-003BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-4**	Batch ID: **41699**	RunNo: **55920**
Prep Date: **11/26/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.7	1.0	5.000	4.512	104	82.8	143	0.888	20	
Surr: DNOP	0.59		0.5000		118	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		87.1	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.6	77.7	130			
Surr: BFB	20		20.00		98.1	72.8	125			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55885**	RunNo: **55885**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864747** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		99.9	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55885**	RunNo: **55885**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.4	77.7	130			
Surr: BFB	22		20.00		109	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55932**	RunNo: **55932**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866368** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	95.1	70	130			
Chlorobenzene	19	1.0	20.00	0	95.4	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.3		10.00		92.5	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55932**	RunNo: **55932**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55932**	RunNo: **55932**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55932**	RunNo: **55932**
Prep Date:	Analysis Date: **11/28/2018**	SeqNo: **1866369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130			
Surr: Toluene-d8	9.3		10.00		93.5	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55969**	RunNo: **55969**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868405** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	19	1.0	20.00	0	93.8	70	130			
Chlorobenzene	20	1.0	20.00	0	97.6	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55969**	RunNo: **55969**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868406** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55969**	RunNo: **55969**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868406** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	0.83	10								J
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55969**	RunNo: **55969**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868406** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **lcs-41702**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41702**	RunNo: **56330**
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882521** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	55.1	104			
4-Chloro-3-methylphenol	150	10	200.0	0	76.1	57	115			
2-Chlorophenol	150	10	200.0	0	73.0	43.4	112			
1,4-Dichlorobenzene	66	10	100.0	0	65.9	38	95.2			
2,4-Dinitrotoluene	60	10	100.0	0	59.9	55.1	96.7			
N-Nitrosodi-n-propylamine	73	10	100.0	0	72.8	55	112			
4-Nitrophenol	95	10	200.0	0	47.5	16.6	93			
Pentachlorophenol	120	20	200.0	0	61.4	43.2	104			
Phenol	110	10	200.0	0	56.3	21.3	85.7			
Pyrene	81	10	100.0	0	80.7	64.9	105			
1,2,4-Trichlorobenzene	76	10	100.0	0	75.6	42.6	107			
Surr: 2-Fluorophenol	130		200.0		64.4	15	74.1			
Surr: Phenol-d5	110		200.0		55.4	15	59.8			
Surr: 2,4,6-Tribromophenol	160		200.0		81.8	22.1	112			
Surr: Nitrobenzene-d5	77		100.0		77.0	33.2	94			
Surr: 2-Fluorobiphenyl	73		100.0		72.7	34	90.9			
Surr: 4-Terphenyl-d14	77		100.0		76.8	15	149			

Sample ID **lcsd-41702**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **41702**	RunNo: **56330**
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882522** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	59.9	55.1	104	16.6	34.9	
4-Chloro-3-methylphenol	130	10	200.0	0	67.3	57	115	12.2	30.2	
2-Chlorophenol	130	10	200.0	0	64.2	43.4	112	12.8	49.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.5	38	95.2	24.5	43.2	
2,4-Dinitrotoluene	56	10	100.0	0	56.1	55.1	96.7	6.48	49.9	
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.4	55	112	9.14	42.1	
4-Nitrophenol	82	10	200.0	0	41.0	16.6	93	14.6	31.5	
Pentachlorophenol	120	20	200.0	0	61.1	43.2	104	0.506	52.5	
Phenol	90	10	200.0	0	44.8	21.3	85.7	22.8	54.4	
Pyrene	78	10	100.0	0	78.4	64.9	105	2.94	30.7	
1,2,4-Trichlorobenzene	57	10	100.0	0	57.2	42.6	107	27.6	48.1	
Surr: 2-Fluorophenol	110		200.0		54.8	15	74.1	0	0	
Surr: Phenol-d5	92		200.0		46.2	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		74.7	22.1	112	0	0	
Surr: Nitrobenzene-d5	65		100.0		65.2	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.9	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**lcsd-41702**	SampType: **LCSD**		TestCode: **EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID: **41702**		RunNo: **56330**					
Prep Date:	**11/26/2018**	Analysis Date: **12/13/2018**		SeqNo: **1882522**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	67		100.0		67.4	15	149	0	0	

Sample ID	**mb-41702**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**					
Client ID:	**PBW**	Batch ID: **41702**		RunNo: **56330**					
Prep Date:	**11/26/2018**	Analysis Date: **12/13/2018**		SeqNo: **1882523**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	16	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41702**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41702**	RunNo: **56330**
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882523** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811A96**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41702**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41702**	RunNo: **56330**
Prep Date: **11/26/2018**	Analysis Date: **12/13/2018**	SeqNo: **1882523** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.5	15	74.1			
Surr: Phenol-d5	110		200.0		54.5	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.1	22.1	112			
Surr: Nitrobenzene-d5	75		100.0		74.7	33.2	94			
Surr: 2-Fluorobiphenyl	71		100.0		70.7	34	90.9			
Surr: 4-Terphenyl-d14	69		100.0		69.0	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811A96** RcptNo: **1**

Received By: **Jazzmine Burkhead** **11/20/2018 1:30:00 PM**

Completed By: **Isaiah Ortiz** **11/20/2018 3:13:44 PM**

Reviewed By: JO 11.21.18

CB: JAB 11/20/18 (unpres) / MJ 11/20/18

Chain of Custody JAB 11/21/18

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2 (1) (<2 or >12 unless noted)

Adjusted? No

Checked by: DAD 11/21/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	Not Present			
2	2.8	Good	Not Present			

Chain-of-Custody Record

Client:	Marathon Petroleum
	GALLUP REFINERY
Mailing Address:	92 GIANT CROSSING ROAD, GALLUP, NM 87301
Phone #:	505-722-3833
Email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard ☐ Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other ☐ EDD (Type)

Turn-Around Time:	X Standard ☐ Rush
Project Name:	2018 4th Qtr GW Sampling MKTF, PW Wells
Project Manager:	C JOHNSON
	(CAJohnson1@Marathonpetroleum.com)
Sampler:	C. JOHNSON
On Ice:	☑ Yes ☐ No
Sample Temperature:	See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811496	Analysis Request: 8260+MTBE	8015D EXTENDED(DRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011/504.1 FOR EDB	CYANIDE	Air Bubbles (Y or N)
11/20/2018	700	AQUEOUS	Field Blank	3-40ml VOAs	HCL	-001	X								
11/20/2018	700	AQUEOUS	Trip Blank	3-40ml VOAs	HCL	-002	X								
11/20/2018	810	AQUEOUS	MKTF-4	MISC	MISC	-003	X	X	X	X	X	X	X		
11/20/2018	830	AQUEOUS	MKTF-11	MISC	MISC	-004	X	X	X	X	X	X			
11/20/2018	849	AQUEOUS	MKTF-10	MISC	MISC	-005	X	X	X	X	X	X			
11/20/2018	922	AQUEOUS	MKTF-39	MISC	MISC	-006	X	X	X	X	X	X			
11/20/2018	948	AQUEOUS	MKTF-38	MISC	MISC	-007	X	X	X	X	X	X			
11/20/2018	858	AQUEOUS	Duplicate	MISC	MISC	-008	X	X	X	X	X	X			
11/20/2018	1030	AQUEOUS	PW-3	MISC	MISC	-009	X		X	X	X	X		X	

Date: 11/20/18	Time: 1330	Relinquished by:	Received by:	Date 11/20/18	Time 13:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: WQCC METALS TO INCLUDE RCRA 8 METALS MINUS URANIUM, INCLUDES MERCURY

Cooler #1 - 3.2 - 1.0(F) = 2.2

Cooler #2 - 3.8 - 1.0(F) = 2.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	11/29/2018 15:45	WG1202394

Method Blank (MB)

(MB) R3364056-1 11/29/18 15:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L1047273-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1047273-10 11/29/18 15:33 • (DUP) R3364056-3 11/29/18 15:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	0.00626	0.00466	1	29.3	J P1	20

L1047677-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1047677-01 11/29/18 15:53 • (DUP) R3364056-6 11/29/18 15:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Cyanide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3364056-2 11/29/18 15:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Cyanide	0.100	0.106	106	85.0-115	

L1047279-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047279-02 11/29/18 15:35 • (MS) R3364056-4 11/29/18 15:36 • (MSD) R3364056-5 11/29/18 15:39

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.104	0.103	104	103	1	75.0-125			0.966	20

L1047677-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1047677-02 11/29/18 15:55 • (MS) R3364056-7 11/29/18 15:56 • (MSD) R3364056-8 11/29/18 15:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	U	0.0952	0.0950	95.2	95.0	1	75.0-125			0.210	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2018 4th Qtr GW Sampling OrderNo.: 1811D80

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 13 sample(s) on 11/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811D80**
Date Reported: **1/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 7:00:00 AM
Lab ID: 1811D80-001 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Toluene	0.23	0.17	1.0	J	µg/L	1	12/3/2018 2:55:00 PM	R56045
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Naphthalene	ND	0.29	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Acetone	ND	0.76	10		µg/L	1	12/3/2018 2:55:00 PM	R56045
Bromobenzene	ND	0.32	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Bromoform	ND	0.32	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Bromomethane	ND	0.27	3.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
2-Butanone	ND	1.4	10		µg/L	1	12/3/2018 2:55:00 PM	R56045
Carbon disulfide	ND	0.39	10		µg/L	1	12/3/2018 2:55:00 PM	R56045
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Chloroethane	ND	0.16	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Chloroform	ND	0.24	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Chloromethane	ND	0.32	3.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Dibromomethane	ND	0.32	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 7:00:00 AM
Lab ID: 1811D80-001 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
2-Hexanone	ND	0.91	10		µg/L	1	12/3/2018 2:55:00 PM	R56045
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/3/2018 2:55:00 PM	R56045
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Styrene	ND	0.25	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/3/2018 2:55:00 PM	R56045
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/3/2018 2:55:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	12/3/2018 2:55:00 PM	R56045
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	1	12/3/2018 2:55:00 PM	R56045
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	12/3/2018 2:55:00 PM	R56045
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	12/3/2018 2:55:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811D80-002
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Toluene	ND	0.17	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Naphthalene	ND	0.29	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Acetone	ND	0.76	10		µg/L	1	12/3/2018 3:19:00 PM	R56045
Bromobenzene	ND	0.32	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Bromoform	ND	0.32	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Bromomethane	ND	0.27	3.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
2-Butanone	ND	1.4	10		µg/L	1	12/3/2018 3:19:00 PM	R56045
Carbon disulfide	ND	0.39	10		µg/L	1	12/3/2018 3:19:00 PM	R56045
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Chloroethane	ND	0.16	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Chloroform	ND	0.24	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Chloromethane	ND	0.32	3.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Dibromomethane	ND	0.32	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811D80-002
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
2-Hexanone	ND	0.91	10		µg/L	1	12/3/2018 3:19:00 PM	R56045
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/3/2018 3:19:00 PM	R56045
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Styrene	ND	0.25	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/3/2018 3:19:00 PM	R56045
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/3/2018 3:19:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	12/3/2018 3:19:00 PM	R56045
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	12/3/2018 3:19:00 PM	R56045
Surr: Dibromofluoromethane	99.4	0	70-130		%Rec	1	12/3/2018 3:19:00 PM	R56045
Surr: Toluene-d8	92.7	0	70-130		%Rec	1	12/3/2018 3:19:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	12/7/2018 7:47:07 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	2.9	0.63	1.0		mg/L	1	11/30/2018 3:30:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 3:30:00 PM	41801
Surr: DNOP	122	0	76.7-135		%Rec	1	11/30/2018 3:30:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	18	0.24	0.50		mg/L	10	11/30/2018 1:00:14 PM	W5598
Surr: BFB	127	0	72.8-125	S	%Rec	10	11/30/2018 1:00:14 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	2.3	0.50	0.50		mg/L	5	11/29/2018 9:00:33 AM	R55951
Chloride	570	25	25		mg/L	50	12/4/2018 12:11:43 PM	R56076
Nitrogen, Nitrite (As N)	0.18	0.025	0.50	J	mg/L	5	11/29/2018 9:00:33 AM	R55951
Bromide	0.97	0.10	0.50		mg/L	5	11/29/2018 9:00:33 AM	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 9:00:33 AM	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 9:00:33 AM	R55951
Sulfate	5.6	0.63	2.5		mg/L	5	11/29/2018 9:00:33 AM	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.43	0.00099	0.0020		mg/L	1	12/29/2018 2:00:45 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:00:45 PM	B56663
Calcium	80	0.078	1.0		mg/L	1	12/29/2018 2:00:45 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:00:45 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:00:45 PM	B56663
Iron	0.078	0.016	0.020		mg/L	1	12/29/2018 2:00:45 PM	B56663
Magnesium	13	0.25	1.0		mg/L	1	12/29/2018 2:00:45 PM	B56663
Manganese	0.75	0.00039	0.0020	*	mg/L	1	12/29/2018 2:00:45 PM	B56663
Potassium	1.6	0.11	1.0		mg/L	1	12/29/2018 2:00:45 PM	B56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 2:00:45 PM	B56663
Sodium	690	1.6	10		mg/L	10	12/29/2018 2:02:56 PM	B56663
Zinc	0.025	0.0021	0.010		mg/L	1	12/29/2018 2:00:45 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.44	0.0010	0.0020		mg/L	1	12/11/2018 8:02:00 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:02:00 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:02:00 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:02:00 PM	41820
Iron	0.24	0.010	0.020		mg/L	1	12/11/2018 8:02:00 PM	41820
Manganese	0.74	0.0011	0.0020	*	mg/L	1	12/11/2018 8:02:00 PM	41820
Silver	0.0029	0.0012	0.0050	J	mg/L	1	12/11/2018 8:02:00 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0035	0.0033	0.010	J	mg/L	1	12/11/2018 8:02:00 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.0021	0.0050		mg/L	5	12/6/2018 3:54:41 PM	B56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:36:55 PM	C56135
Selenium	ND	0.0038	0.0050		mg/L	5	12/6/2018 3:54:41 PM	B56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	12/5/2018 4:42:05 PM	41820
Lead	0.00059	0.00023	0.00050		mg/L	1	12/5/2018 4:42:05 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:42:05 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/12/2018 3:12:47 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 3:12:47 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4-Dimethylphenol	30	5.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 3:12:47 PM	41855
1-Methylnaphthalene	34	7.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Methylphenol	22	6.3	10		µg/L	1	12/12/2018 3:12:47 PM	41855
3+4-Methylphenol	17	5.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 3:12:47 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Naphthalene	35	5.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 3:12:47 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 3:12:47 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Phenol	14	6.0	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 3:12:47 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 3:12:47 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 3:12:47 PM	41855
Surr: 2-Fluorophenol	51.8	0	15-74.1		%Rec	1	12/12/2018 3:12:47 PM	41855
Surr: Phenol-d5	45.0	0	15-59.8		%Rec	1	12/12/2018 3:12:47 PM	41855
Surr: 2,4,6-Tribromophenol	87.0	0	22.1-112		%Rec	1	12/12/2018 3:12:47 PM	41855
Surr: Nitrobenzene-d5	69.4	0	33.2-94		%Rec	1	12/12/2018 3:12:47 PM	41855
Surr: 2-Fluorobiphenyl	61.1	0	34-90.9		%Rec	1	12/12/2018 3:12:47 PM	41855
Surr: 4-Terphenyl-d14	112	0	15-149		%Rec	1	12/12/2018 3:12:47 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	5500	17	100		µg/L	100	12/3/2018 3:43:00 PM	R56045
Toluene	82	1.7	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Ethylbenzene	510	2.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Methyl tert-butyl ether (MTBE)	99	4.6	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2,4-Trimethylbenzene	460	2.5	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,3,5-Trimethylbenzene	22	2.3	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Naphthalene	42	2.9	20		µg/L	10	12/3/2018 4:06:00 PM	R56045
1-Methylnaphthalene	25	3.4	40	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
2-Methylnaphthalene	4.5	3.5	40	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
Acetone	ND	7.6	100		µg/L	10	12/3/2018 4:06:00 PM	R56045
Bromobenzene	ND	3.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Bromodichloromethane	ND	2.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Bromoform	ND	3.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Bromomethane	ND	2.7	30		µg/L	10	12/3/2018 4:06:00 PM	R56045
2-Butanone	ND	14	100		µg/L	10	12/3/2018 4:06:00 PM	R56045
Carbon disulfide	ND	3.9	100		µg/L	10	12/3/2018 4:06:00 PM	R56045
Carbon Tetrachloride	ND	1.4	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Chlorobenzene	ND	2.9	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Chloroethane	9.9	1.6	20	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
Chloroform	ND	2.4	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Chloromethane	ND	3.2	30		µg/L	10	12/3/2018 4:06:00 PM	R56045
2-Chlorotoluene	ND	2.5	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
4-Chlorotoluene	ND	2.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
cis-1,2-DCE	8.6	3.8	10	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	12/3/2018 4:06:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	2.4	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Dibromomethane	ND	3.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1-Dichloroethane	44	1.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1-Dichloroethene	7.0	1.2	10	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2-Dichloropropane	ND	1.7	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,3-Dichloropropane	ND	2.7	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
2,2-Dichloropropane	ND	2.3	20		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1-Dichloropropene	ND	1.6	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Hexachlorobutadiene	ND	3.9	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
2-Hexanone	ND	9.1	100		µg/L	10	12/3/2018 4:06:00 PM	R56045
Isopropylbenzene	27	2.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
4-Isopropyltoluene	2.9	2.4	10	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	12/3/2018 4:06:00 PM	R56045
Methylene Chloride	ND	2.1	30		µg/L	10	12/3/2018 4:06:00 PM	R56045
n-Butylbenzene	9.5	2.5	30	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
n-Propylbenzene	96	2.4	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
sec-Butylbenzene	5.9	2.0	10	J	µg/L	10	12/3/2018 4:06:00 PM	R56045
Styrene	ND	2.5	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
tert-Butylbenzene	ND	2.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	12/3/2018 4:06:00 PM	R56045
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
trans-1,2-DCE	ND	1.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1,1-Trichloroethane	ND	1.6	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Trichlorofluoromethane	ND	1.4	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	12/3/2018 4:06:00 PM	R56045
Vinyl chloride	28	1.2	10		µg/L	10	12/3/2018 4:06:00 PM	R56045
Xylenes, Total	170	6.4	15		µg/L	10	12/3/2018 4:06:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	10	12/3/2018 4:06:00 PM	R56045
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	10	12/3/2018 4:06:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-2
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:04:00 AM
Lab ID: 1811D80-003
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	10	12/3/2018 4:06:00 PM	R56045
Surr: Toluene-d8	95.1	0	70-130		%Rec	10	12/3/2018 4:06:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:35:00 AM
Lab ID: 1811D80-004
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	1.8	0.63	1.0		mg/L	1	11/30/2018 3:45:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 3:45:00 PM	41801
Surr: DNOP	120	0	76.7-135		%Rec	1	11/30/2018 3:45:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	9.1	0.49	1.0		mg/L	20	11/30/2018 1:23:03 PM	W5598
Surr: BFB	99.2	0	72.8-125		%Rec	20	11/30/2018 1:23:03 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 9:26:17 AM	R55951
Chloride	260	10	10		mg/L	20	11/29/2018 9:39:08 AM	R55951
Nitrogen, Nitrite (As N)	0.11	0.025	0.50	J	mg/L	5	11/29/2018 9:26:17 AM	R55951
Bromide	1.1	0.10	0.50		mg/L	5	11/29/2018 9:26:17 AM	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 9:26:17 AM	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 9:26:17 AM	R55951
Sulfate	24	0.63	2.5		mg/L	5	11/29/2018 9:26:17 AM	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.49	0.00099	0.0020		mg/L	1	12/29/2018 2:05:11 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:05:11 PM	B56663
Calcium	160	0.39	5.0		mg/L	5	12/29/2018 2:14:08 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:05:11 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:05:11 PM	B56663
Iron	0.82	0.016	0.020	*	mg/L	1	12/29/2018 2:05:11 PM	B56663
Magnesium	31	0.25	1.0		mg/L	1	12/29/2018 2:05:11 PM	B56663
Manganese	4.1	0.0020	0.010	*	mg/L	5	12/29/2018 2:14:08 PM	B56663
Potassium	0.51	0.11	1.0	J	mg/L	1	12/29/2018 2:05:11 PM	B56663
Silver	0.0029	0.0018	0.0050	J	mg/L	1	12/29/2018 2:05:11 PM	B56663
Sodium	270	0.82	5.0		mg/L	5	12/29/2018 2:14:08 PM	B56663
Zinc	0.022	0.0021	0.010		mg/L	1	12/29/2018 2:05:11 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.52	0.0010	0.0020		mg/L	1	12/11/2018 8:06:12 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:06:12 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:06:12 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:06:12 PM	41820
Iron	1.9	0.051	0.10	*	mg/L	5	12/11/2018 8:08:20 PM	41820
Manganese	3.9	0.0055	0.010	*	mg/L	5	12/11/2018 8:08:20 PM	41820
Silver	0.0048	0.0012	0.0050	J	mg/L	1	12/11/2018 8:06:12 PM	41820
Zinc	ND	0.0033	0.010		mg/L	1	12/11/2018 8:06:12 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:35:00 AM
Lab ID: 1811D80-004
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0016	0.00042	0.0010		mg/L	1	12/6/2018 1:39:19 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:39:19 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:39:19 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	12/5/2018 4:47:57 PM	41820
Lead	0.00080	0.00023	0.00050		mg/L	1	12/5/2018 4:47:57 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:47:57 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/12/2018 4:41:00 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:35:00 AM
Lab ID: 1811D80-004
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 4:41:00 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 4:41:00 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 4:41:00 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Fluorene	6.6	6.3	10	J	µg/L	1	12/12/2018 4:41:00 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 4:41:00 PM	41855
1-Methylnaphthalene	65	7.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Methylnaphthalene	13	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 4:41:00 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 4:41:00 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Naphthalene	46	5.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 4:41:00 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 4:41:00 PM	41855
Phenanthrene	7.5	6.0	10	J	µg/L	1	12/12/2018 4:41:00 PM	41855
Phenol	14	6.0	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:35:00 AM
Lab ID: 1811D80-004
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 4:41:00 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 4:41:00 PM	41855
Surr: 2-Fluorophenol	48.0	0	15-74.1		%Rec	1	12/12/2018 4:41:00 PM	41855
Surr: Phenol-d5	41.9	0	15-59.8		%Rec	1	12/12/2018 4:41:00 PM	41855
Surr: 2,4,6-Tribromophenol	80.7	0	22.1-112		%Rec	1	12/12/2018 4:41:00 PM	41855
Surr: Nitrobenzene-d5	73.4	0	33.2-94		%Rec	1	12/12/2018 4:41:00 PM	41855
Surr: 2-Fluorobiphenyl	57.8	0	34-90.9		%Rec	1	12/12/2018 4:41:00 PM	41855
Surr: 4-Terphenyl-d14	114	0	15-149		%Rec	1	12/12/2018 4:41:00 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3300	35	200		µg/L	200	12/3/2018 5:18:00 PM	R56045
Toluene	20	3.4	20	J	µg/L	20	12/3/2018 5:42:00 PM	R56045
Ethylbenzene	190	4.5	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Methyl tert-butyl ether (MTBE)	560	9.1	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2,4-Trimethylbenzene	110	5.1	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Naphthalene	62	5.8	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
1-Methylnaphthalene	70	6.7	80	J	µg/L	20	12/3/2018 5:42:00 PM	R56045
2-Methylnaphthalene	14	6.9	80	J	µg/L	20	12/3/2018 5:42:00 PM	R56045
Acetone	ND	15	200		µg/L	20	12/3/2018 5:42:00 PM	R56045
Bromobenzene	ND	6.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Bromodichloromethane	ND	5.7	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Bromoform	ND	6.5	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Bromomethane	ND	5.5	60		µg/L	20	12/3/2018 5:42:00 PM	R56045
2-Butanone	ND	28	200		µg/L	20	12/3/2018 5:42:00 PM	R56045
Carbon disulfide	ND	7.7	200		µg/L	20	12/3/2018 5:42:00 PM	R56045
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Chlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Chloroethane	ND	3.3	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
Chloroform	ND	4.7	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Chloromethane	ND	6.4	60		µg/L	20	12/3/2018 5:42:00 PM	R56045
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
cis-1,2-DCE	20	7.5	20	J	µg/L	20	12/3/2018 5:42:00 PM	R56045
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
Dibromochloromethane	ND	4.7	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Dibromomethane	ND	6.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-9
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 11:35:00 AM
Lab ID: 1811D80-004
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1-Dichloroethane	22	3.5	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1-Dichloroethene	34	2.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
2-Hexanone	ND	18	200		µg/L	20	12/3/2018 5:42:00 PM	R56045
Isopropylbenzene	11	4.4	20	J	µg/L	20	12/3/2018 5:42:00 PM	R56045
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/3/2018 5:42:00 PM	R56045
Methylene Chloride	ND	4.1	60		µg/L	20	12/3/2018 5:42:00 PM	R56045
n-Butylbenzene	ND	5.0	60		µg/L	20	12/3/2018 5:42:00 PM	R56045
n-Propylbenzene	22	4.9	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
sec-Butylbenzene	ND	4.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Styrene	ND	5.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1,1-Trichloroethane	31	3.3	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/3/2018 5:42:00 PM	R56045
Vinyl chloride	ND	2.4	20		µg/L	20	12/3/2018 5:42:00 PM	R56045
Xylenes, Total	73	13	30		µg/L	20	12/3/2018 5:42:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	20	12/3/2018 5:42:00 PM	R56045
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	20	12/3/2018 5:42:00 PM	R56045
Surr: Dibromofluoromethane	103	0	70-130		%Rec	20	12/3/2018 5:42:00 PM	R56045
Surr: Toluene-d8	97.8	0	70-130		%Rec	20	12/3/2018 5:42:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:35:00 AM
Lab ID: 1811D80-005 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	4.5	0.63	1.0		mg/L	1	11/30/2018 4:00:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 4:00:00 PM	41801
Surr: DNOP	122	0	76.7-135		%Rec	1	11/30/2018 4:00:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	24	0.24	0.50		mg/L	10	11/30/2018 2:31:32 PM	W5598
Surr: BFB	124	0	72.8-125		%Rec	10	11/30/2018 2:31:32 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 9:52:00 AM	R55951
Chloride	220	10	10		mg/L	20	11/29/2018 10:04:52 A	R55951
Nitrogen, Nitrite (As N)	0.10	0.025	0.50	J	mg/L	5	11/29/2018 9:52:00 AM	R55951
Bromide	1.3	0.10	0.50		mg/L	5	11/29/2018 9:52:00 AM	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 9:52:00 AM	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 9:52:00 AM	R55951
Sulfate	ND	0.63	2.5		mg/L	5	11/29/2018 9:52:00 AM	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	5.6	0.020	0.040	*	mg/L	20	12/29/2018 2:20:47 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:16:24 PM	B56663
Calcium	240	0.39	5.0		mg/L	5	12/29/2018 2:18:34 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:16:24 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:16:24 PM	B56663
Iron	10	0.33	0.40	*	mg/L	20	12/29/2018 2:20:47 PM	B56663
Magnesium	43	0.25	1.0		mg/L	1	12/29/2018 2:16:24 PM	B56663
Manganese	4.4	0.0020	0.010	*	mg/L	5	12/29/2018 2:18:34 PM	B56663
Potassium	0.31	0.11	1.0	J	mg/L	1	12/29/2018 2:16:24 PM	B56663
Silver	0.0037	0.0018	0.0050	J	mg/L	1	12/29/2018 2:16:24 PM	B56663
Sodium	180	0.82	5.0		mg/L	5	12/29/2018 2:18:34 PM	B56663
Zinc	0.017	0.0021	0.010		mg/L	1	12/29/2018 2:16:24 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	5.9	0.020	0.040	*	mg/L	20	12/13/2018 3:33:02 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:10:19 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:10:19 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:10:19 PM	41820
Iron	16	0.20	0.40	*	mg/L	20	12/13/2018 3:33:02 PM	41820
Manganese	4.4	0.0055	0.010	*	mg/L	5	12/11/2018 8:12:28 PM	41820
Silver	0.0060	0.0012	0.0050		mg/L	1	12/11/2018 8:10:19 PM	41820
Zinc	ND	0.0033	0.010		mg/L	1	12/11/2018 8:10:19 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:35:00 AM
Lab ID: 1811D80-005
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0025	0.00042	0.0010		mg/L	1	12/6/2018 1:41:44 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:41:44 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:41:44 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0044	0.00041	0.0010		mg/L	1	12/5/2018 4:49:54 PM	41820
Lead	0.00080	0.00023	0.00050		mg/L	1	12/5/2018 4:49:54 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:49:54 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/12/2018 5:10:26 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:35:00 AM
Lab ID: 1811D80-005 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 5:10:26 PM	41855
2,4-Dimethylphenol	21	5.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 5:10:26 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 5:10:26 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Fluorene	7.6	6.3	10	J	µg/L	1	12/12/2018 5:10:26 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 5:10:26 PM	41855
1-Methylnaphthalene	91	7.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Methylnaphthalene	100	6.3	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Methylphenol	7.1	6.3	10	J	µg/L	1	12/12/2018 5:10:26 PM	41855
3+4-Methylphenol	9.9	5.4	10	J	µg/L	1	12/12/2018 5:10:26 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 5:10:26 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Naphthalene	150	5.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 5:10:26 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 5:10:26 PM	41855
Phenanthrene	6.3	6.0	10	J	µg/L	1	12/12/2018 5:10:26 PM	41855
Phenol	45	6.0	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 5:10:26 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 5:10:26 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:35:00 AM
Lab ID: 1811D80-005 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 5:10:26 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 5:10:26 PM	41855
Surr: 2-Fluorophenol	31.9	0	15-74.1		%Rec	1	12/12/2018 5:10:26 PM	41855
Surr: Phenol-d5	50.5	0	15-59.8		%Rec	1	12/12/2018 5:10:26 PM	41855
Surr: 2,4,6-Tribromophenol	91.0	0	22.1-112		%Rec	1	12/12/2018 5:10:26 PM	41855
Surr: Nitrobenzene-d5	82.5	0	33.2-94		%Rec	1	12/12/2018 5:10:26 PM	41855
Surr: 2-Fluorobiphenyl	70.7	0	34-90.9		%Rec	1	12/12/2018 5:10:26 PM	41855
Surr: 4-Terphenyl-d14	117	0	15-149		%Rec	1	12/12/2018 5:10:26 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	4500	35	200		µg/L	200	12/3/2018 6:06:00 PM	R56045
Toluene	130	3.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Ethylbenzene	530	4.5	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Methyl tert-butyl ether (MTBE)	1400	9.1	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2,4-Trimethylbenzene	520	5.1	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,3,5-Trimethylbenzene	140	4.6	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Naphthalene	170	5.8	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
1-Methylnaphthalene	94	6.7	80		µg/L	20	12/3/2018 6:30:00 PM	R56045
2-Methylnaphthalene	110	6.9	80		µg/L	20	12/3/2018 6:30:00 PM	R56045
Acetone	ND	15	200		µg/L	20	12/3/2018 6:30:00 PM	R56045
Bromobenzene	ND	6.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Bromodichloromethane	ND	5.7	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Bromoform	ND	6.5	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Bromomethane	ND	5.5	60		µg/L	20	12/3/2018 6:30:00 PM	R56045
2-Butanone	ND	28	200		µg/L	20	12/3/2018 6:30:00 PM	R56045
Carbon disulfide	ND	7.7	200		µg/L	20	12/3/2018 6:30:00 PM	R56045
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Chlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Chloroethane	ND	3.3	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
Chloroform	ND	4.7	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Chloromethane	ND	6.4	60		µg/L	20	12/3/2018 6:30:00 PM	R56045
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
Dibromochloromethane	ND	4.7	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Dibromomethane	ND	6.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-13
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:35:00 AM
Lab ID: 1811D80-005 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
2-Hexanone	ND	18	200		µg/L	20	12/3/2018 6:30:00 PM	R56045
Isopropylbenzene	22	4.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
4-Isopropyltoluene	6.1	4.8	20	J	µg/L	20	12/3/2018 6:30:00 PM	R56045
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/3/2018 6:30:00 PM	R56045
Methylene Chloride	ND	4.1	60		µg/L	20	12/3/2018 6:30:00 PM	R56045
n-Butylbenzene	6.5	5.0	60	J	µg/L	20	12/3/2018 6:30:00 PM	R56045
n-Propylbenzene	40	4.9	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
sec-Butylbenzene	5.4	4.0	20	J	µg/L	20	12/3/2018 6:30:00 PM	R56045
Styrene	ND	5.0	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/3/2018 6:30:00 PM	R56045
Vinyl chloride	ND	2.4	20		µg/L	20	12/3/2018 6:30:00 PM	R56045
Xylenes, Total	2800	13	30		µg/L	20	12/3/2018 6:30:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	20	12/3/2018 6:30:00 PM	R56045
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	20	12/3/2018 6:30:00 PM	R56045
Surr: Dibromofluoromethane	105	0	70-130		%Rec	20	12/3/2018 6:30:00 PM	R56045
Surr: Toluene-d8	92.1	0	70-130		%Rec	20	12/3/2018 6:30:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:46:00 AM
Lab ID: 1811D80-006 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	1.6	0.63	1.0		mg/L	1	11/30/2018 4:15:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 4:15:00 PM	41801
Surr: DNOP	123	0	76.7-135		%Rec	1	11/30/2018 4:15:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	3.0	0.024	0.050		mg/L	1	11/30/2018 2:54:22 PM	W5598
Surr: BFB	115	0	72.8-125		%Rec	1	11/30/2018 2:54:22 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.90	0.50	0.50		mg/L	5	11/29/2018 10:17:42 A	R55951
Chloride	110	10	10		mg/L	20	11/29/2018 10:30:34 A	R55951
Nitrogen, Nitrite (As N)	0.075	0.025	0.50	J	mg/L	5	11/29/2018 10:17:42 A	R55951
Bromide	1.5	0.10	0.50		mg/L	5	11/29/2018 10:17:42 A	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 10:17:42 A	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 10:17:42 A	R55951
Sulfate	120	0.63	2.5		mg/L	5	11/29/2018 10:17:42 A	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.43	0.00099	0.0020		mg/L	1	12/29/2018 2:22:52 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:22:52 PM	B56663
Calcium	100	0.39	5.0		mg/L	5	12/29/2018 2:25:05 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:22:52 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:22:52 PM	B56663
Iron	0.27	0.016	0.020		mg/L	1	12/29/2018 2:22:52 PM	B56663
Magnesium	20	0.25	1.0		mg/L	1	12/29/2018 2:22:52 PM	B56663
Manganese	2.5	0.0020	0.010	*	mg/L	5	12/29/2018 2:25:05 PM	B56663
Potassium	0.78	0.11	1.0	J	mg/L	1	12/29/2018 2:22:52 PM	B56663
Silver	0.0020	0.0018	0.0050	J	mg/L	1	12/29/2018 2:22:52 PM	B56663
Sodium	280	0.82	5.0		mg/L	5	12/29/2018 2:25:05 PM	B56663
Zinc	0.020	0.0021	0.010		mg/L	1	12/29/2018 2:22:52 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.46	0.0010	0.0020		mg/L	1	12/11/2018 8:14:27 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:14:27 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:14:27 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:14:27 PM	41820
Iron	2.0	0.051	0.10	*	mg/L	5	12/11/2018 8:16:27 PM	41820
Manganese	2.2	0.0055	0.010	*	mg/L	5	12/11/2018 8:16:27 PM	41820
Silver	0.0032	0.0012	0.0050	J	mg/L	1	12/11/2018 8:14:27 PM	41820
Zinc	0.0036	0.0033	0.010	J	mg/L	1	12/11/2018 8:14:27 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:46:00 AM
Lab ID: 1811D80-006
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0085	0.00042	0.0010		mg/L	1	12/6/2018 1:44:09 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:44:09 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:44:09 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0066	0.00041	0.0010		mg/L	1	12/5/2018 4:51:50 PM	41820
Lead	0.00042	0.00023	0.00050	J	mg/L	1	12/5/2018 4:51:50 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:51:50 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Benzoic acid	18	6.3	20	J	µg/L	1	12/12/2018 5:39:55 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:46:00 AM
Lab ID: 1811D80-006 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 5:39:55 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 5:39:55 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 5:39:55 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 5:39:55 PM	41855
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 5:39:55 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 5:39:55 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Naphthalene	ND	5.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 5:39:55 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 5:39:55 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Phenol	ND	6.0	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:46:00 AM
Lab ID: 1811D80-006 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 5:39:55 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 5:39:55 PM	41855
Surr: 2-Fluorophenol	60.8	0	15-74.1		%Rec	1	12/12/2018 5:39:55 PM	41855
Surr: Phenol-d5	41.8	0	15-59.8		%Rec	1	12/12/2018 5:39:55 PM	41855
Surr: 2,4,6-Tribromophenol	86.4	0	22.1-112		%Rec	1	12/12/2018 5:39:55 PM	41855
Surr: Nitrobenzene-d5	71.4	0	33.2-94		%Rec	1	12/12/2018 5:39:55 PM	41855
Surr: 2-Fluorobiphenyl	58.6	0	34-90.9		%Rec	1	12/12/2018 5:39:55 PM	41855
Surr: 4-Terphenyl-d14	114	0	15-149		%Rec	1	12/12/2018 5:39:55 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3.6	0.87	5.0	J	µg/L	5	12/3/2018 7:17:00 PM	R56045
Toluene	ND	0.84	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Ethylbenzene	28	1.1	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Methyl tert-butyl ether (MTBE)	5700	23	50		µg/L	50	12/3/2018 6:53:00 PM	R56045
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.95	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Naphthalene	ND	1.4	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
1-Methylnaphthalene	ND	1.7	20		µg/L	5	12/3/2018 7:17:00 PM	R56045
2-Methylnaphthalene	ND	1.7	20		µg/L	5	12/3/2018 7:17:00 PM	R56045
Acetone	ND	3.8	50		µg/L	5	12/3/2018 7:17:00 PM	R56045
Bromobenzene	ND	1.6	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Bromodichloromethane	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Bromoform	ND	1.6	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Bromomethane	ND	1.4	15		µg/L	5	12/3/2018 7:17:00 PM	R56045
2-Butanone	ND	7.1	50		µg/L	5	12/3/2018 7:17:00 PM	R56045
Carbon disulfide	ND	1.9	50		µg/L	5	12/3/2018 7:17:00 PM	R56045
Carbon Tetrachloride	ND	0.69	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Chlorobenzene	ND	1.5	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Chloroethane	ND	0.82	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
Chloroform	ND	1.2	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Chloromethane	ND	1.6	15		µg/L	5	12/3/2018 7:17:00 PM	R56045
2-Chlorotoluene	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
4-Chlorotoluene	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
Dibromochloromethane	ND	1.2	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Dibromomethane	ND	1.6	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-17
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:46:00 AM
Lab ID: 1811D80-006 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,4-Dichlorobenzene	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1-Dichloroethane	ND	0.88	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2-Dichloropropane	ND	0.83	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
2,2-Dichloropropane	ND	1.2	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Hexachlorobutadiene	ND	2.0	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
2-Hexanone	ND	4.5	50		µg/L	5	12/3/2018 7:17:00 PM	R56045
Isopropylbenzene	2.5	1.1	5.0	J	µg/L	5	12/3/2018 7:17:00 PM	R56045
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	12/3/2018 7:17:00 PM	R56045
Methylene Chloride	ND	1.0	15		µg/L	5	12/3/2018 7:17:00 PM	R56045
n-Butylbenzene	ND	1.2	15		µg/L	5	12/3/2018 7:17:00 PM	R56045
n-Propylbenzene	2.8	1.2	5.0	J	µg/L	5	12/3/2018 7:17:00 PM	R56045
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Styrene	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
trans-1,2-DCE	ND	0.91	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1,1-Trichloroethane	ND	0.82	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Trichlorofluoromethane	ND	0.72	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	12/3/2018 7:17:00 PM	R56045
Vinyl chloride	ND	0.61	5.0		µg/L	5	12/3/2018 7:17:00 PM	R56045
Xylenes, Total	ND	3.2	7.5		µg/L	5	12/3/2018 7:17:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	5	12/3/2018 7:17:00 PM	R56045
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	5	12/3/2018 7:17:00 PM	R56045
Surr: Dibromofluoromethane	108	0	70-130		%Rec	5	12/3/2018 7:17:00 PM	R56045
Surr: Toluene-d8	94.1	0	70-130		%Rec	5	12/3/2018 7:17:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	12/7/2018 8:13:44 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	7.8	0.63	1.0		mg/L	1	11/30/2018 4:30:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 4:30:00 PM	41801
Surr: DNOP	134	0	76.7-135		%Rec	1	11/30/2018 4:30:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	15	0.49	1.0		mg/L	20	11/30/2018 3:17:09 PM	W5598
Surr: BFB	103	0	72.8-125		%Rec	20	11/30/2018 3:17:09 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 11:09:09 A	R55951
Chloride	140	10	10		mg/L	20	11/29/2018 11:22:02 A	R55951
Nitrogen, Nitrite (As N)	0.084	0.025	0.50	J	mg/L	5	11/29/2018 11:09:09 A	R55951
Bromide	1.4	0.10	0.50		mg/L	5	11/29/2018 11:09:09 A	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 11:09:09 A	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 11:09:09 A	R55951
Sulfate	ND	0.63	2.5		mg/L	5	11/29/2018 11:09:09 A	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	1.2	0.0049	0.010		mg/L	5	12/29/2018 2:29:16 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:27:13 PM	B56663
Calcium	140	0.39	5.0		mg/L	5	12/29/2018 2:29:16 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:27:13 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:27:13 PM	B56663
Iron	8.3	0.33	0.40	*	mg/L	20	12/29/2018 2:31:16 PM	B56663
Magnesium	28	0.25	1.0		mg/L	1	12/29/2018 2:27:13 PM	B56663
Manganese	2.2	0.0020	0.010	*	mg/L	5	12/29/2018 2:29:16 PM	B56663
Potassium	0.87	0.11	1.0	J	mg/L	1	12/29/2018 2:27:13 PM	B56663
Silver	0.0022	0.0018	0.0050	J	mg/L	1	12/29/2018 2:27:13 PM	B56663
Sodium	280	0.82	5.0		mg/L	5	12/29/2018 2:29:16 PM	B56663
Zinc	0.018	0.0021	0.010		mg/L	1	12/29/2018 2:27:13 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.9	0.0050	0.010		mg/L	5	12/11/2018 8:20:33 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:18:25 PM	41820
Chromium	0.0043	0.0018	0.0060	J	mg/L	1	12/11/2018 8:18:25 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:18:25 PM	41820
Iron	7.5	0.20	0.40	*	mg/L	20	12/13/2018 3:37:17 PM	41820
Manganese	2.4	0.0055	0.010	*	mg/L	5	12/11/2018 8:20:33 PM	41820
Silver	0.0020	0.0012	0.0050	J	mg/L	1	12/11/2018 8:18:25 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.020	0.0033	0.010		mg/L	1	12/21/2018 9:10:50 AM	42189
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	12/6/2018 1:53:51 PM	C56135
Lead	0.0017	0.00017	0.00050		mg/L	1	12/6/2018 1:53:51 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:53:51 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	12/5/2018 4:53:46 PM	41820
Lead	0.0051	0.00023	0.00050		mg/L	1	12/5/2018 4:53:46 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:53:46 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/12/2018 6:09:21 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Carbazole	8.0	6.3	10	J	µg/L	1	12/12/2018 6:09:21 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 6:09:21 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 6:09:21 PM	41855
1-Methylnaphthalene	120	7.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2-Methylnaphthalene	210	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 6:09:21 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 6:09:21 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Naphthalene	400	50	100	D	µg/L	10	12/17/2018 11:17:00 A	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 6:09:21 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 6:09:21 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Phenol	11	6.0	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 6:09:21 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 6:09:21 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 6:09:21 PM	41855
Surr: 2-Fluorophenol	33.2	0	15-74.1		%Rec	1	12/12/2018 6:09:21 PM	41855
Surr: Phenol-d5	39.4	0	15-59.8		%Rec	1	12/12/2018 6:09:21 PM	41855
Surr: 2,4,6-Tribromophenol	77.1	0	22.1-112		%Rec	1	12/12/2018 6:09:21 PM	41855
Surr: Nitrobenzene-d5	58.7	0	33.2-94		%Rec	1	12/12/2018 6:09:21 PM	41855
Surr: 2-Fluorobiphenyl	46.2	0	34-90.9		%Rec	1	12/12/2018 6:09:21 PM	41855
Surr: 4-Terphenyl-d14	106	0	15-149		%Rec	1	12/12/2018 6:09:21 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1900	3.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Toluene	ND	3.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Ethylbenzene	630	4.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Methyl tert-butyl ether (MTBE)	10000	91	200		µg/L	200	12/3/2018 7:41:00 PM	R56045
1,2,4-Trimethylbenzene	580	5.1	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,3,5-Trimethylbenzene	79	4.6	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Naphthalene	340	5.8	40		µg/L	20	12/3/2018 8:05:00 PM	R56045
1-Methylnaphthalene	78	6.7	80	J	µg/L	20	12/3/2018 8:05:00 PM	R56045
2-Methylnaphthalene	130	6.9	80		µg/L	20	12/3/2018 8:05:00 PM	R56045
Acetone	ND	15	200		µg/L	20	12/3/2018 8:05:00 PM	R56045
Bromobenzene	ND	6.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Bromodichloromethane	ND	5.7	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Bromoform	ND	6.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Bromomethane	ND	5.5	60		µg/L	20	12/3/2018 8:05:00 PM	R56045
2-Butanone	ND	28	200		µg/L	20	12/3/2018 8:05:00 PM	R56045
Carbon disulfide	ND	7.7	200		µg/L	20	12/3/2018 8:05:00 PM	R56045
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Chlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Chloroethane	ND	3.3	40		µg/L	20	12/3/2018 8:05:00 PM	R56045
Chloroform	ND	4.7	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Chloromethane	ND	6.4	60		µg/L	20	12/3/2018 8:05:00 PM	R56045
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/3/2018 8:05:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Dibromomethane	ND	6.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
2-Hexanone	ND	18	200		µg/L	20	12/3/2018 8:05:00 PM	R56045
Isopropylbenzene	28	4.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/3/2018 8:05:00 PM	R56045
Methylene Chloride	ND	4.1	60		µg/L	20	12/3/2018 8:05:00 PM	R56045
n-Butylbenzene	7.1	5.0	60	J	µg/L	20	12/3/2018 8:05:00 PM	R56045
n-Propylbenzene	79	4.9	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
sec-Butylbenzene	4.6	4.0	20	J	µg/L	20	12/3/2018 8:05:00 PM	R56045
Styrene	ND	5.0	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/3/2018 8:05:00 PM	R56045
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/3/2018 8:05:00 PM	R56045
Vinyl chloride	ND	2.4	20		µg/L	20	12/3/2018 8:05:00 PM	R56045
Xylenes, Total	570	13	30		µg/L	20	12/3/2018 8:05:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	20	12/3/2018 8:05:00 PM	R56045
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	20	12/3/2018 8:05:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-19
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 8:25:00 AM
Lab ID: 1811D80-007
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	104	0	70-130		%Rec	20	12/3/2018 8:05:00 PM	R56045
Surr: Toluene-d8	94.9	0	70-130		%Rec	20	12/3/2018 8:05:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:02:00 AM
Lab ID: 1811D80-008 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	2.0	0.63	1.0		mg/L	1	11/30/2018 4:45:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 4:45:00 PM	41801
Surr: DNOP	134	0	76.7-135		%Rec	1	11/30/2018 4:45:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	11	0.49	1.0		mg/L	20	11/30/2018 3:39:53 PM	W5598
Surr: BFB	95.2	0	72.8-125		%Rec	20	11/30/2018 3:39:53 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 11:34:55 A	R55951
Chloride	130	10	10		mg/L	20	11/29/2018 11:47:46 A	R55951
Nitrogen, Nitrite (As N)	0.079	0.025	0.50	J	mg/L	5	11/29/2018 11:34:55 A	R55951
Bromide	0.89	0.10	0.50		mg/L	5	11/29/2018 11:34:55 A	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 11:34:55 A	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 11:34:55 A	R55951
Sulfate	5.8	0.63	2.5		mg/L	5	11/29/2018 11:34:55 A	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	1.1	0.0049	0.010		mg/L	5	12/29/2018 2:42:12 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:33:21 PM	B56663
Calcium	140	0.39	5.0		mg/L	5	12/29/2018 2:42:12 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:33:21 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:33:21 PM	B56663
Iron	1.4	0.082	0.10	*	mg/L	5	12/29/2018 2:42:12 PM	B56663
Magnesium	27	0.25	1.0		mg/L	1	12/29/2018 2:33:21 PM	B56663
Manganese	2.5	0.0020	0.010	*	mg/L	5	12/29/2018 2:42:12 PM	B56663
Potassium	0.82	0.11	1.0	J	mg/L	1	12/29/2018 2:33:21 PM	B56663
Silver	0.0024	0.0018	0.0050	J	mg/L	1	12/29/2018 2:33:21 PM	B56663
Sodium	270	0.82	5.0		mg/L	5	12/29/2018 2:42:12 PM	B56663
Zinc	0.010	0.0021	0.010		mg/L	1	12/29/2018 2:33:21 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.4	0.0050	0.010		mg/L	5	12/11/2018 8:30:57 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:28:55 PM	41820
Chromium	0.0023	0.0018	0.0060	J	mg/L	1	12/11/2018 8:28:55 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:28:55 PM	41820
Iron	12	0.20	0.40	*	mg/L	20	12/13/2018 3:39:16 PM	41820
Manganese	2.5	0.0055	0.010	*	mg/L	5	12/11/2018 8:30:57 PM	41820
Silver	0.0030	0.0012	0.0050	J	mg/L	1	12/11/2018 8:28:55 PM	41820
Zinc	0.0077	0.0033	0.010	J	mg/L	1	12/11/2018 8:28:55 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:02:00 AM
Lab ID: 1811D80-008
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0011	0.00042	0.0010		mg/L	1	12/6/2018 1:56:16 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:56:16 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:56:16 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	12/5/2018 4:55:42 PM	41820
Lead	0.0037	0.00023	0.00050		mg/L	1	12/5/2018 4:55:42 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:55:42 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzoic acid	25	6.3	20		µg/L	1	12/12/2018 6:38:39 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:02:00 AM
Lab ID: 1811D80-008
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 6:38:39 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 6:38:39 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 6:38:39 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 6:38:39 PM	41855
1-Methylnaphthalene	32	7.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 6:38:39 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 6:38:39 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Naphthalene	12	5.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 6:38:39 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 6:38:39 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Phenol	23	6.0	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:02:00 AM
Lab ID: 1811D80-008
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 6:38:39 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 6:38:39 PM	41855
Surr: 2-Fluorophenol	49.9	0	15-74.1		%Rec	1	12/12/2018 6:38:39 PM	41855
Surr: Phenol-d5	43.8	0	15-59.8		%Rec	1	12/12/2018 6:38:39 PM	41855
Surr: 2,4,6-Tribromophenol	83.4	0	22.1-112		%Rec	1	12/12/2018 6:38:39 PM	41855
Surr: Nitrobenzene-d5	63.1	0	33.2-94		%Rec	1	12/12/2018 6:38:39 PM	41855
Surr: 2-Fluorobiphenyl	50.5	0	34-90.9		%Rec	1	12/12/2018 6:38:39 PM	41855
Surr: 4-Terphenyl-d14	104	0	15-149		%Rec	1	12/12/2018 6:38:39 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3000	35	200		µg/L	200	12/3/2018 8:29:00 PM	R56045
Toluene	8.4	3.4	20	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
Ethylbenzene	170	4.5	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Methyl tert-butyl ether (MTBE)	6000	91	200		µg/L	200	12/3/2018 8:29:00 PM	R56045
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Naphthalene	15	5.8	40	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
1-Methylnaphthalene	41	6.7	80	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
2-Methylnaphthalene	ND	6.9	80		µg/L	20	12/3/2018 8:52:00 PM	R56045
Acetone	ND	15	200		µg/L	20	12/3/2018 8:52:00 PM	R56045
Bromobenzene	ND	6.4	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Bromodichloromethane	ND	5.7	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Bromoform	ND	6.5	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Bromomethane	ND	5.5	60		µg/L	20	12/3/2018 8:52:00 PM	R56045
2-Butanone	ND	28	200		µg/L	20	12/3/2018 8:52:00 PM	R56045
Carbon disulfide	ND	7.7	200		µg/L	20	12/3/2018 8:52:00 PM	R56045
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Chlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Chloroethane	ND	3.3	40		µg/L	20	12/3/2018 8:52:00 PM	R56045
Chloroform	ND	4.7	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Chloromethane	ND	6.4	60		µg/L	20	12/3/2018 8:52:00 PM	R56045
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
cis-1,2-DCE	11	7.5	20	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/3/2018 8:52:00 PM	R56045
Dibromochloromethane	ND	4.7	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Dibromomethane	ND	6.4	20		µg/L	20	12/3/2018 8:52:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-22
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:02:00 AM
Lab ID: 1811D80-008 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1-Dichloroethene	14	2.4	20	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
2-Hexanone	ND	18	200		µg/L	20	12/3/2018 8:52:00 PM	R56045
Isopropylbenzene	7.7	4.4	20	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/3/2018 8:52:00 PM	R56045
Methylene Chloride	ND	4.1	60		µg/L	20	12/3/2018 8:52:00 PM	R56045
n-Butylbenzene	ND	5.0	60		µg/L	20	12/3/2018 8:52:00 PM	R56045
n-Propylbenzene	14	4.9	20	J	µg/L	20	12/3/2018 8:52:00 PM	R56045
sec-Butylbenzene	ND	4.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Styrene	ND	5.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/3/2018 8:52:00 PM	R56045
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/3/2018 8:52:00 PM	R56045
Vinyl chloride	ND	2.4	20		µg/L	20	12/3/2018 8:52:00 PM	R56045
Xylenes, Total	ND	13	30		µg/L	20	12/3/2018 8:52:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	20	12/3/2018 8:52:00 PM	R56045
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	20	12/3/2018 8:52:00 PM	R56045
Surr: Dibromofluoromethane	104	0	70-130		%Rec	20	12/3/2018 8:52:00 PM	R56045
Surr: Toluene-d8	95.9	0	70-130		%Rec	20	12/3/2018 8:52:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	12/7/2018 8:40:02 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	0.69	0.63	1.0	J	mg/L	1	11/30/2018 5:00:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 5:00:00 PM	41801
Surr: DNOP	137	0	76.7-135	S	%Rec	1	11/30/2018 5:00:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.24	0.024	0.050		mg/L	1	11/30/2018 4:02:30 PM	W5598
Surr: BFB	87.1	0	72.8-125		%Rec	1	11/30/2018 4:02:30 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 12:00:39 P	R55951
Chloride	97	10	10		mg/L	20	11/29/2018 12:13:31 P	R55951
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/29/2018 12:00:39 P	R55951
Bromide	0.64	0.10	0.50		mg/L	5	11/29/2018 12:00:39 P	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 12:00:39 P	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 12:00:39 P	R55951
Sulfate	220	2.5	10		mg/L	20	11/29/2018 12:13:31 P	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.055	0.00099	0.0020		mg/L	1	12/29/2018 2:44:26 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:44:26 PM	B56663
Calcium	80	0.078	1.0		mg/L	1	12/29/2018 2:44:26 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:44:26 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:44:26 PM	B56663
Iron	0.030	0.016	0.020		mg/L	1	12/29/2018 2:44:26 PM	B56663
Magnesium	17	0.25	1.0		mg/L	1	12/29/2018 2:44:26 PM	B56663
Manganese	0.28	0.00039	0.0020	*	mg/L	1	12/29/2018 2:44:26 PM	B56663
Potassium	1.1	0.11	1.0		mg/L	1	12/29/2018 2:44:26 PM	B56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 2:44:26 PM	B56663
Sodium	300	0.82	5.0		mg/L	5	12/29/2018 2:46:36 PM	B56663
Zinc	0.032	0.0021	0.010		mg/L	1	12/29/2018 2:44:26 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.13	0.0010	0.0020		mg/L	1	12/11/2018 8:32:56 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:32:56 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:32:56 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:32:56 PM	41820
Iron	2.7	0.051	0.10	*	mg/L	5	12/11/2018 8:34:56 PM	41820
Manganese	0.45	0.0011	0.0020	*	mg/L	1	12/11/2018 8:32:56 PM	41820
Silver	0.0024	0.0012	0.0050	J	mg/L	1	12/11/2018 8:32:56 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0070	0.0033	0.010	J	mg/L	1	12/11/2018 8:32:56 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00049	0.00042	0.0010	J	mg/L	1	12/6/2018 1:58:40 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 1:58:40 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 1:58:40 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0010	0.00041	0.0010		mg/L	1	12/5/2018 4:57:38 PM	41820
Lead	0.0019	0.00023	0.00050		mg/L	1	12/5/2018 4:57:38 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 4:57:38 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Acenaphthylene	ND	62	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Aniline	ND	62	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Anthracene	ND	57	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Azobenzene	ND	67	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benz(a)anthracene	ND	53	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzo(a)pyrene	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzoic acid	ND	63	200	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Benzyl alcohol	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Carbazole	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Chloroaniline	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Chloronaphthalene	ND	61	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Chlorophenol	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Chrysene	ND	68	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	69	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Diethyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Dimethyl phthalate	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Fluoranthene	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Fluorene	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Hexachlorobenzene	ND	62	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Hexachlorobutadiene	ND	64	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Hexachloroethane	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Isophorone	ND	62	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
1-Methylnaphthalene	ND	70	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Methylnaphthalene	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Methylphenol	ND	63	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
3+4-Methylphenol	ND	54	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Naphthalene	ND	50	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Nitroaniline	ND	59	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
3-Nitroaniline	ND	68	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Nitroaniline	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Nitrobenzene	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2-Nitrophenol	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
4-Nitrophenol	ND	56	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Pentachlorophenol	ND	53	200	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Phenanthrene	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Phenol	ND	60	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Pyrene	ND	65	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	54	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	12/13/2018 5:38:39 PM	41855
Surr: 2-Fluorophenol	0	0	15-74.1	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
Surr: Phenol-d5	0	0	15-59.8	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
Surr: Nitrobenzene-d5	0	0	33.2-94	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
Surr: 2-Fluorobiphenyl	0	0	34-90.9	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
Surr: 4-Terphenyl-d14	0	0	15-149	SD	%Rec	10	12/13/2018 5:38:39 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.35	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Toluene	ND	0.34	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Ethylbenzene	ND	0.45	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Methyl tert-butyl ether (MTBE)	450	9.1	20		µg/L	20	12/3/2018 9:16:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.38	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Naphthalene	ND	0.58	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
2-Methylnaphthalene	ND	0.69	8.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Acetone	ND	1.5	20		µg/L	2	12/3/2018 9:40:00 PM	R56045
Bromobenzene	ND	0.64	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Bromodichloromethane	ND	0.57	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Bromoform	ND	0.65	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Bromomethane	ND	0.55	6.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
2-Butanone	ND	2.8	20		µg/L	2	12/3/2018 9:40:00 PM	R56045
Carbon disulfide	ND	0.77	20		µg/L	2	12/3/2018 9:40:00 PM	R56045
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Chlorobenzene	ND	0.58	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Chloroethane	ND	0.33	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Chloroform	ND	0.47	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Chloromethane	ND	0.64	6.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.47	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Dibromomethane	ND	0.64	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1-Dichloroethane	ND	0.35	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1-Dichloroethene	ND	0.24	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
2-Hexanone	ND	1.8	20		µg/L	2	12/3/2018 9:40:00 PM	R56045
Isopropylbenzene	ND	0.44	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	12/3/2018 9:40:00 PM	R56045
Methylene Chloride	ND	0.41	6.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
n-Butylbenzene	ND	0.50	6.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
n-Propylbenzene	ND	0.49	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
sec-Butylbenzene	ND	0.40	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Styrene	ND	0.50	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Vinyl chloride	ND	0.24	2.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Xylenes, Total	ND	1.3	3.0		µg/L	2	12/3/2018 9:40:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	2	12/3/2018 9:40:00 PM	R56045
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	2	12/3/2018 9:40:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-33
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:20:00 AM
Lab ID: 1811D80-009
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	108	0	70-130		%Rec	2	12/3/2018 9:40:00 PM	R56045
Surr: Toluene-d8	95.8	0	70-130		%Rec	2	12/3/2018 9:40:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	12/7/2018 9:06:13 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/30/2018 5:15:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 5:15:00 PM	41801
Surr: DNOP	141	0	76.7-135	S	%Rec	1	11/30/2018 5:15:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/30/2018 4:47:47 PM	W5598
Surr: BFB	95.3	0	72.8-125		%Rec	1	11/30/2018 4:47:47 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 12:26:22 P	R55951
Chloride	210	10	10		mg/L	20	11/29/2018 12:39:15 P	R55951
Nitrogen, Nitrite (As N)	0.089	0.025	0.50	J	mg/L	5	11/29/2018 12:26:22 P	R55951
Bromide	1.0	0.10	0.50		mg/L	5	11/29/2018 12:26:22 P	R55951
Nitrogen, Nitrate (As N)	8.4	0.25	0.50		mg/L	5	11/29/2018 12:26:22 P	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 12:26:22 P	R55951
Sulfate	280	2.5	10		mg/L	20	11/29/2018 12:39:15 P	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.035	0.00099	0.0020		mg/L	1	12/29/2018 2:48:44 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:48:44 PM	B56663
Calcium	58	0.078	1.0		mg/L	1	12/29/2018 2:48:44 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:48:44 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:48:44 PM	B56663
Iron	ND	0.016	0.020		mg/L	1	12/29/2018 2:48:44 PM	B56663
Magnesium	13	0.25	1.0		mg/L	1	12/29/2018 2:48:44 PM	B56663
Manganese	0.00040	0.00039	0.0020	J	mg/L	1	12/29/2018 2:48:44 PM	B56663
Potassium	1.5	0.11	1.0		mg/L	1	12/29/2018 2:48:44 PM	B56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 2:48:44 PM	B56663
Sodium	400	0.82	5.0		mg/L	5	12/29/2018 2:50:54 PM	B56663
Zinc	0.026	0.0021	0.010		mg/L	1	12/29/2018 2:48:44 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.053	0.0010	0.0020		mg/L	1	12/11/2018 8:36:55 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:36:55 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:36:55 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:36:55 PM	41820
Iron	0.63	0.010	0.020	*	mg/L	1	12/11/2018 8:36:55 PM	41820
Manganese	0.013	0.0011	0.0020		mg/L	1	12/11/2018 8:36:55 PM	41820
Silver	0.0016	0.0012	0.0050	J	mg/L	1	12/11/2018 8:36:55 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0079	0.0033	0.010	J	mg/L	1	12/11/2018 8:36:55 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00087	0.00042	0.0010	J	mg/L	1	12/6/2018 2:01:05 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 2:01:05 PM	C56135
Selenium	0.0022	0.00076	0.0010		mg/L	1	12/6/2018 2:01:05 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	12/5/2018 4:59:34 PM	41820
Lead	0.00048	0.00023	0.00050	J	mg/L	1	12/5/2018 4:59:34 PM	41820
Selenium	0.0022	0.00098	0.0010		mg/L	1	12/5/2018 4:59:34 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Acenaphthylene	ND	62	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Aniline	ND	62	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Anthracene	ND	57	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Azobenzene	ND	67	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benz(a)anthracene	ND	53	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzo(a)pyrene	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzoic acid	ND	63	200	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Benzyl alcohol	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Carbazole	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Chloroaniline	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Chloronaphthalene	ND	61	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Chlorophenol	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Chrysene	ND	68	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	69	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Diethyl phthalate	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Dimethyl phthalate	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Fluoranthene	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Fluorene	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Hexachlorobenzene	ND	62	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Hexachlorobutadiene	ND	64	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Hexachloroethane	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Isophorone	ND	62	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
1-Methylnaphthalene	ND	70	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Methylnaphthalene	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Methylphenol	ND	63	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
3+4-Methylphenol	ND	54	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Naphthalene	ND	50	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Nitroaniline	ND	59	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
3-Nitroaniline	ND	68	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Nitroaniline	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Nitrobenzene	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2-Nitrophenol	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
4-Nitrophenol	ND	56	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Pentachlorophenol	ND	53	200	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Phenanthrene	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Phenol	ND	60	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Pyrene	ND	65	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	54	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	12/13/2018 6:07:49 PM	41855
Surr: 2-Fluorophenol	0	0	15-74.1	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
Surr: Phenol-d5	0	0	15-59.8	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
Surr: Nitrobenzene-d5	0	0	33.2-94	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
Surr: 2-Fluorobiphenyl	0	0	34-90.9	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
Surr: 4-Terphenyl-d14	0	0	15-149	SD	%Rec	10	12/13/2018 6:07:49 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Toluene	ND	0.17	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Methyl tert-butyl ether (MTBE)	1.0	0.46	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Naphthalene	ND	0.29	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Acetone	ND	0.76	10		µg/L	1	12/3/2018 10:04:00 PM	R56045
Bromobenzene	ND	0.32	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Bromoform	ND	0.32	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Bromomethane	ND	0.27	3.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
2-Butanone	ND	1.4	10		µg/L	1	12/3/2018 10:04:00 PM	R56045
Carbon disulfide	ND	0.39	10		µg/L	1	12/3/2018 10:04:00 PM	R56045
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Chloroethane	ND	0.16	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Chloroform	ND	0.24	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Chloromethane	ND	0.32	3.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Dibromomethane	ND	0.32	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1-Dichloroethene	2.1	0.12	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
2-Hexanone	ND	0.91	10		µg/L	1	12/3/2018 10:04:00 PM	R56045
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/3/2018 10:04:00 PM	R56045
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Styrene	ND	0.25	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Trichloroethene (TCE)	3.7	0.26	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/3/2018 10:04:00 PM	R56045
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/3/2018 10:04:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	116	0	70-130		%Rec	1	12/3/2018 10:04:00 PM	R56045
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	12/3/2018 10:04:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-34
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 9:04:00 AM
Lab ID: 1811D80-010
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	12/3/2018 10:04:00 PM	R56045
Surr: Toluene-d8	92.5	0	70-130		%Rec	1	12/3/2018 10:04:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	12/7/2018 9:32:34 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/30/2018 5:30:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 5:30:00 PM	41801
Surr: DNOP	106	0	76.7-135		%Rec	1	11/30/2018 5:30:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.72	0.024	0.050		mg/L	1	11/30/2018 8:12:45 PM	W5598
Surr: BFB	102	0	72.8-125		%Rec	1	11/30/2018 8:12:45 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.85	0.50	0.50		mg/L	5	11/29/2018 12:52:07 P	R55951
Chloride	170	10	10		mg/L	20	11/29/2018 1:04:58 PM	R55951
Nitrogen, Nitrite (As N)	0.068	0.025	0.50	J	mg/L	5	11/29/2018 12:52:07 P	R55951
Bromide	1.3	0.10	0.50		mg/L	5	11/29/2018 12:52:07 P	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 12:52:07 P	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 12:52:07 P	R55951
Sulfate	39	0.63	2.5		mg/L	5	11/29/2018 12:52:07 P	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.31	0.00099	0.0020		mg/L	1	12/29/2018 2:53:02 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:53:02 PM	B56663
Calcium	150	0.39	5.0		mg/L	5	12/29/2018 2:55:06 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:53:02 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:53:02 PM	B56663
Iron	3.2	0.082	0.10	*	mg/L	5	12/29/2018 2:55:06 PM	B56663
Magnesium	42	0.25	1.0		mg/L	1	12/29/2018 2:53:02 PM	B56663
Manganese	3.0	0.0020	0.010	*	mg/L	5	12/29/2018 2:55:06 PM	B56663
Potassium	0.51	0.11	1.0	J	mg/L	1	12/29/2018 2:53:02 PM	B56663
Silver	0.0025	0.0018	0.0050	J	mg/L	1	12/29/2018 2:53:02 PM	B56663
Sodium	180	0.82	5.0		mg/L	5	12/29/2018 2:55:06 PM	B56663
Zinc	0.044	0.0021	0.010		mg/L	1	12/29/2018 2:53:02 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.1	0.0050	0.010		mg/L	5	12/11/2018 8:43:13 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:41:05 PM	41820
Chromium	0.0027	0.0018	0.0060	J	mg/L	1	12/11/2018 8:41:05 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:41:05 PM	41820
Iron	6.7	0.10	0.20	*	mg/L	10	12/13/2018 3:41:21 PM	41820
Manganese	3.0	0.0055	0.010	*	mg/L	5	12/11/2018 8:43:13 PM	41820
Silver	0.0033	0.0012	0.0050	J	mg/L	1	12/11/2018 8:41:05 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0074	0.0033	0.010	J	mg/L	1	12/11/2018 8:41:05 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	ND	0.00042	0.0010		mg/L	1	12/6/2018 2:03:30 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 2:03:30 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 2:03:30 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0019	0.00041	0.0010		mg/L	1	12/5/2018 5:01:30 PM	41820
Lead	0.0031	0.00023	0.00050		mg/L	1	12/5/2018 5:01:30 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 5:01:30 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Benzoic acid	18	6.3	20	J	µg/L	1	12/12/2018 8:06:01 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 8:06:01 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 8:06:01 PM	41855
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 8:06:01 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 8:06:01 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Naphthalene	ND	5.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 8:06:01 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 8:06:01 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Phenol	ND	6.0	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 8:06:01 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 8:06:01 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 8:06:01 PM	41855
Surr: 2-Fluorophenol	32.1	0	15-74.1		%Rec	1	12/12/2018 8:06:01 PM	41855
Surr: Phenol-d5	26.9	0	15-59.8		%Rec	1	12/12/2018 8:06:01 PM	41855
Surr: 2,4,6-Tribromophenol	54.6	0	22.1-112		%Rec	1	12/12/2018 8:06:01 PM	41855
Surr: Nitrobenzene-d5	52.3	0	33.2-94		%Rec	1	12/12/2018 8:06:01 PM	41855
Surr: 2-Fluorobiphenyl	40.5	0	34-90.9		%Rec	1	12/12/2018 8:06:01 PM	41855
Surr: 4-Terphenyl-d14	101	0	15-149		%Rec	1	12/12/2018 8:06:01 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	19	0.17	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Toluene	0.17	0.17	1.0	J	µg/L	1	12/3/2018 10:28:00 PM	R56045
Ethylbenzene	1.2	0.22	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Methyl tert-butyl ether (MTBE)	77	0.46	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Naphthalene	ND	0.29	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Acetone	ND	0.76	10		µg/L	1	12/3/2018 10:28:00 PM	R56045
Bromobenzene	ND	0.32	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Bromoform	ND	0.32	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Bromomethane	ND	0.27	3.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
2-Butanone	ND	1.4	10		µg/L	1	12/3/2018 10:28:00 PM	R56045
Carbon disulfide	ND	0.39	10		µg/L	1	12/3/2018 10:28:00 PM	R56045
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Chlorobenzene	0.33	0.29	1.0	J	µg/L	1	12/3/2018 10:28:00 PM	R56045
Chloroethane	ND	0.16	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Chloroform	ND	0.24	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Chloromethane	ND	0.32	3.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Dibromomethane	ND	0.32	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,4-Dichlorobenzene	4.0	0.29	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1-Dichloroethane	0.66	0.18	1.0	J	µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
2-Hexanone	ND	0.91	10		µg/L	1	12/3/2018 10:28:00 PM	R56045
Isopropylbenzene	0.34	0.22	1.0	J	µg/L	1	12/3/2018 10:28:00 PM	R56045
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/3/2018 10:28:00 PM	R56045
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
sec-Butylbenzene	1.2	0.20	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Styrene	ND	0.25	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/3/2018 10:28:00 PM	R56045
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/3/2018 10:28:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	12/3/2018 10:28:00 PM	R56045
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	12/3/2018 10:28:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-35
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:18:00 PM
Lab ID: 1811D80-011
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	12/3/2018 10:28:00 PM	R56045
Surr: Toluene-d8	94.4	0	70-130		%Rec	1	12/3/2018 10:28:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	12/7/2018 9:58:57 PM	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/30/2018 5:45:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 5:45:00 PM	41801
Surr: DNOP	105	0	76.7-135		%Rec	1	11/30/2018 5:45:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.20	0.024	0.050		mg/L	1	11/30/2018 8:35:33 PM	W5598
Surr: BFB	88.2	0	72.8-125		%Rec	1	11/30/2018 8:35:33 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/29/2018 1:43:33 PM	R55951
Chloride	96	10	10		mg/L	20	11/29/2018 1:56:25 PM	R55951
Nitrogen, Nitrite (As N)	0.081	0.025	0.50	J	mg/L	5	11/29/2018 1:43:33 PM	R55951
Bromide	0.61	0.10	0.50		mg/L	5	11/29/2018 1:43:33 PM	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 1:43:33 PM	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 1:43:33 PM	R55951
Sulfate	230	2.5	10		mg/L	20	11/29/2018 1:56:25 PM	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.056	0.00099	0.0020		mg/L	1	12/29/2018 2:57:05 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 2:57:05 PM	B56663
Calcium	81	0.078	1.0		mg/L	1	12/29/2018 2:57:05 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 2:57:05 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 2:57:05 PM	B56663
Iron	ND	0.016	0.020		mg/L	1	12/29/2018 2:57:05 PM	B56663
Magnesium	17	0.25	1.0		mg/L	1	12/29/2018 2:57:05 PM	B56663
Manganese	0.44	0.00039	0.0020	*	mg/L	1	12/29/2018 2:57:05 PM	B56663
Potassium	0.97	0.11	1.0	J	mg/L	1	12/29/2018 2:57:05 PM	B56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 2:57:05 PM	B56663
Sodium	300	0.82	5.0		mg/L	5	12/29/2018 2:59:14 PM	B56663
Zinc	0.040	0.0021	0.010		mg/L	1	12/29/2018 2:57:05 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.17	0.0010	0.0020		mg/L	1	12/11/2018 8:45:14 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:45:14 PM	41820
Chromium	0.0027	0.0018	0.0060	J	mg/L	1	12/11/2018 8:45:14 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:45:14 PM	41820
Iron	4.0	0.051	0.10	*	mg/L	5	12/11/2018 8:47:14 PM	41820
Manganese	0.59	0.0011	0.0020	*	mg/L	1	12/11/2018 8:45:14 PM	41820
Silver	0.0023	0.0012	0.0050	J	mg/L	1	12/11/2018 8:45:14 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.014	0.0033	0.010		mg/L	1	12/21/2018 9:19:24 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00045	0.00042	0.0010	J	mg/L	1	12/6/2018 2:08:20 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 2:08:20 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 2:08:20 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0011	0.00041	0.0010		mg/L	1	12/5/2018 5:03:26 PM	41820
Lead	0.0030	0.00023	0.00050		mg/L	1	12/5/2018 5:03:26 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 5:03:26 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/12/2018 8:34:55 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 8:34:55 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 8:34:55 PM	41855
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 8:34:55 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 8:34:55 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Naphthalene	ND	5.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 8:34:55 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 8:34:55 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Phenol	ND	6.0	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 8:34:55 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 8:34:55 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 8:34:55 PM	41855
Surr: 2-Fluorophenol	45.1	0	15-74.1		%Rec	1	12/12/2018 8:34:55 PM	41855
Surr: Phenol-d5	33.0	0	15-59.8		%Rec	1	12/12/2018 8:34:55 PM	41855
Surr: 2,4,6-Tribromophenol	79.5	0	22.1-112		%Rec	1	12/12/2018 8:34:55 PM	41855
Surr: Nitrobenzene-d5	66.3	0	33.2-94		%Rec	1	12/12/2018 8:34:55 PM	41855
Surr: 2-Fluorobiphenyl	55.7	0	34-90.9		%Rec	1	12/12/2018 8:34:55 PM	41855
Surr: 4-Terphenyl-d14	109	0	15-149		%Rec	1	12/12/2018 8:34:55 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.25	0.17	1.0	J	µg/L	1	12/3/2018 10:51:00 PM	R56045
Toluene	ND	0.17	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Methyl tert-butyl ether (MTBE)	290	4.6	10		µg/L	10	12/4/2018 12:26:00 PM	R56074
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Naphthalene	ND	0.29	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Acetone	ND	0.76	10		µg/L	1	12/3/2018 10:51:00 PM	R56045
Bromobenzene	ND	0.32	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Bromoform	ND	0.32	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Bromomethane	ND	0.27	3.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
2-Butanone	ND	1.4	10		µg/L	1	12/3/2018 10:51:00 PM	R56045
Carbon disulfide	ND	0.39	10		µg/L	1	12/3/2018 10:51:00 PM	R56045
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Chloroethane	ND	0.16	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Chloroform	ND	0.24	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Chloromethane	ND	0.32	3.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Dibromomethane	ND	0.32	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
2-Hexanone	ND	0.91	10		µg/L	1	12/3/2018 10:51:00 PM	R56045
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/3/2018 10:51:00 PM	R56045
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Styrene	ND	0.25	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/3/2018 10:51:00 PM	R56045
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/3/2018 10:51:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	12/3/2018 10:51:00 PM	R56045
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	12/3/2018 10:51:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 10:28:00 AM
Lab ID: 1811D80-012
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	109	0	70-130		%Rec	1	12/3/2018 10:51:00 PM	R56045
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	12/3/2018 10:51:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013 **Matrix:** AQUEOUS **Received Date:** 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	12/10/2018 11:02:53 A	41941
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **JME**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/30/2018 6:00:00 PM	41801
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/30/2018 6:00:00 PM	41801
Surr: DNOP	103	0	76.7-135		%Rec	1	11/30/2018 6:00:00 PM	41801
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.12	0.024	0.050		mg/L	1	11/30/2018 9:21:04 PM	W5598
Surr: BFB	92.1	0	72.8-125		%Rec	1	11/30/2018 9:21:04 PM	W5598
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	0.73	0.50	0.50		mg/L	5	11/29/2018 2:09:18 PM	R55951
Chloride	220	10	10		mg/L	20	11/29/2018 2:22:10 PM	R55951
Nitrogen, Nitrite (As N)	0.10	0.025	0.50	J	mg/L	5	11/29/2018 2:09:18 PM	R55951
Bromide	1.0	0.10	0.50		mg/L	5	11/29/2018 2:09:18 PM	R55951
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/29/2018 2:09:18 PM	R55951
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/29/2018 2:09:18 PM	R55951
Sulfate	ND	0.63	2.5		mg/L	5	11/29/2018 2:09:18 PM	R55951
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	1.4	0.0049	0.010		mg/L	5	12/29/2018 3:10:21 PM	B56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 3:01:22 PM	B56663
Calcium	89	0.078	1.0		mg/L	1	12/29/2018 3:01:22 PM	B56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 3:01:22 PM	B56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 3:01:22 PM	B56663
Iron	0.11	0.016	0.020		mg/L	1	12/29/2018 3:01:22 PM	B56663
Magnesium	22	0.25	1.0		mg/L	1	12/29/2018 3:01:22 PM	B56663
Manganese	2.0	0.0020	0.010	*	mg/L	5	12/29/2018 3:10:21 PM	B56663
Potassium	0.46	0.11	1.0	J	mg/L	1	12/29/2018 3:01:22 PM	B56663
Silver	0.0020	0.0018	0.0050	J	mg/L	1	12/29/2018 3:01:22 PM	B56663
Sodium	290	0.82	5.0		mg/L	5	12/29/2018 3:10:21 PM	B56663
Zinc	0.027	0.0021	0.010		mg/L	1	12/29/2018 3:01:22 PM	B56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.4	0.0050	0.010		mg/L	5	12/11/2018 8:57:44 PM	41820
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 8:55:40 PM	41820
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 8:55:40 PM	41820
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 8:55:40 PM	41820
Iron	2.5	0.051	0.10	*	mg/L	5	12/11/2018 8:57:44 PM	41820
Manganese	1.9	0.0055	0.010	*	mg/L	5	12/11/2018 8:57:44 PM	41820
Silver	0.0028	0.0012	0.0050	J	mg/L	1	12/11/2018 8:55:40 PM	41820

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Zinc	0.0040	0.0033	0.010	J	mg/L	1	12/13/2018 3:45:20 PM	41820
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00055	0.00042	0.0010	J	mg/L	1	12/6/2018 2:10:44 PM	C56135
Lead	ND	0.00017	0.00050		mg/L	1	12/6/2018 2:10:44 PM	C56135
Selenium	ND	0.00076	0.0010		mg/L	1	12/6/2018 2:10:44 PM	C56135
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0018	0.00041	0.0010		mg/L	1	12/5/2018 5:05:23 PM	41820
Lead	0.00042	0.00023	0.00050	J	mg/L	1	12/5/2018 5:05:23 PM	41820
Selenium	ND	0.00098	0.0010		mg/L	1	12/5/2018 5:05:23 PM	41820
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Benzoic acid	17	6.3	20	J	µg/L	1	12/12/2018 9:03:57 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/12/2018 9:03:57 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/12/2018 9:03:57 PM	41855
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/12/2018 9:03:57 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/12/2018 9:03:57 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Naphthalene	ND	5.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/12/2018 9:03:57 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/12/2018 9:03:57 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Phenol	ND	6.0	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/12/2018 9:03:57 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/12/2018 9:03:57 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/12/2018 9:03:57 PM	41855
Surr: 2-Fluorophenol	41.0	0	15-74.1		%Rec	1	12/12/2018 9:03:57 PM	41855
Surr: Phenol-d5	36.2	0	15-59.8		%Rec	1	12/12/2018 9:03:57 PM	41855
Surr: 2,4,6-Tribromophenol	58.2	0	22.1-112		%Rec	1	12/12/2018 9:03:57 PM	41855
Surr: Nitrobenzene-d5	68.6	0	33.2-94		%Rec	1	12/12/2018 9:03:57 PM	41855
Surr: 2-Fluorobiphenyl	54.3	0	34-90.9		%Rec	1	12/12/2018 9:03:57 PM	41855
Surr: 4-Terphenyl-d14	89.1	0	15-149		%Rec	1	12/12/2018 9:03:57 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	0.90	0.35	2.0	JP	µg/L	2	12/3/2018 11:15:00 PM	R56045
Toluene	ND	0.34	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Ethylbenzene	ND	0.45	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Methyl tert-butyl ether (MTBE)	130	0.91	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2,4-Trimethylbenzene	ND	0.51	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,3,5-Trimethylbenzene	ND	0.46	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2-Dichloroethane (EDC)	ND	0.38	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2-Dibromoethane (EDB)	ND	0.46	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Naphthalene	ND	0.58	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1-Methylnaphthalene	ND	0.67	8.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
2-Methylnaphthalene	ND	0.69	8.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Acetone	ND	1.5	20	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Bromobenzene	ND	0.64	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Bromodichloromethane	ND	0.57	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Bromoform	ND	0.65	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Bromomethane	ND	0.55	6.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
2-Butanone	ND	2.8	20	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Carbon disulfide	ND	0.77	20	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Carbon Tetrachloride	ND	0.27	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Chlorobenzene	ND	0.58	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Chloroethane	ND	0.33	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Chloroform	ND	0.47	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Chloromethane	ND	0.64	6.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
2-Chlorotoluene	ND	0.50	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
4-Chlorotoluene	ND	0.56	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
cis-1,2-DCE	ND	0.75	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
cis-1,3-Dichloropropene	ND	0.60	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2-Dibromo-3-chloropropane	ND	0.94	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	0.47	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Dibromomethane	ND	0.64	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2-Dichlorobenzene	ND	0.62	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,3-Dichlorobenzene	ND	0.63	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,4-Dichlorobenzene	ND	0.58	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Dichlorodifluoromethane	ND	0.52	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1-Dichloroethane	ND	0.35	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1-Dichloroethene	ND	0.24	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2-Dichloropropane	ND	0.33	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,3-Dichloropropane	ND	0.54	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
2,2-Dichloropropane	ND	0.47	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1-Dichloropropene	ND	0.33	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Hexachlorobutadiene	ND	0.78	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
2-Hexanone	ND	1.8	20	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Isopropylbenzene	ND	0.44	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
4-Isopropyltoluene	ND	0.48	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
4-Methyl-2-pentanone	ND	0.91	20	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Methylene Chloride	ND	0.41	6.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
n-Butylbenzene	ND	0.50	6.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
n-Propylbenzene	ND	0.49	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
sec-Butylbenzene	ND	0.40	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Styrene	ND	0.50	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
tert-Butylbenzene	ND	0.44	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1,1,2-Tetrachloroethane	ND	0.50	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1,2,2-Tetrachloroethane	ND	0.66	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Tetrachloroethene (PCE)	ND	0.30	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
trans-1,2-DCE	ND	0.36	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
trans-1,3-Dichloropropene	ND	0.55	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2,3-Trichlorobenzene	ND	0.56	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2,4-Trichlorobenzene	ND	0.53	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1,1-Trichloroethane	ND	0.33	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,1,2-Trichloroethane	ND	0.47	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Trichloroethene (TCE)	ND	0.52	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Trichlorofluoromethane	ND	0.29	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
1,2,3-Trichloropropane	ND	1.1	4.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Vinyl chloride	ND	0.24	2.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Xylenes, Total	ND	1.3	3.0	P	µg/L	2	12/3/2018 11:15:00 PM	R56045
Surr: 1,2-Dichloroethane-d4	114	0	70-130	P	%Rec	2	12/3/2018 11:15:00 PM	R56045
Surr: 4-Bromofluorobenzene	102	0	70-130	P	%Rec	2	12/3/2018 11:15:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-18
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/28/2018 12:50:00 PM
Lab ID: 1811D80-013
Matrix: AQUEOUS
Received Date: 11/28/2018 3:55:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	106	0	70-130	P	%Rec	2	12/3/2018 11:15:00 PM	R56045
Surr: Toluene-d8	96.0	0	70-130	P	%Rec	2	12/3/2018 11:15:00 PM	R56045

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895973** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.5	85	115			
Calcium	50	1.0	50.00	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	95.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Magnesium	50	1.0	50.00	0	99.2	85	115			
Manganese	0.49	0.0020	0.5000	0	97.2	85	115			
Potassium	49	1.0	50.00	0	98.2	85	115			
Silver	0.099	0.0050	0.1000	0	99.4	85	115			
Sodium	51	1.0	50.00	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	95.7	85	115			

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895975** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	93.7	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	93.1	50	150			J
Calcium	0.51	1.0	0.5000	0	102	50	150			J
Chromium	0.0056	0.0060	0.006000	0	92.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B56663**	RunNo:	**56663**
Prep Date:		Analysis Date:	**12/29/2018**	SeqNo:	**1895975** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0053	0.0060	0.006000	0	88.0	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Magnesium	0.51	1.0	0.5000	0	101	50	150			J
Manganese	0.0021	0.0020	0.002000	0	104	50	150			
Potassium	0.49	1.0	0.5000	0	98.1	50	150			J
Silver	0.0049	0.0050	0.005000	0	99.0	50	150			J
Sodium	0.52	1.0	0.5000	0	105	50	150			J
Zinc	0.0055	0.010	0.005000	0	110	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41820**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID: **41820**	RunNo: **56108**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874276** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LCS-41820**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID: **41820**	RunNo: **56108**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Chromium	0.49	0.0060	0.5000	0	97.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.50	0.020	0.5000	0	99.1	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			

Sample ID	**LLLCS-41820**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID:	**BatchQC**	Batch ID: **41820**	RunNo: **56108**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1874278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0024	0.0020	0.002000	0	121	50	150			
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0065	0.0060	0.006000	0	109	50	150			
Copper	0.0058	0.0060	0.006000	0	96.7	50	150			J
Iron	0.023	0.020	0.02000	0	116	50	150			
Manganese	0.0026	0.0020	0.002000	0	131	50	150			
Silver	0.0047	0.0050	0.005000	0	93.3	50	150			J

Sample ID	**MB-41820**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID: **41820**	RunNo: **56188**
Prep Date:	**11/30/2018**	Analysis Date: **12/7/2018**	SeqNo: **1876890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LCS-41820**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **41820**			RunNo: **56188**					
Prep Date:	**11/30/2018**	Analysis Date: **12/7/2018**			SeqNo: **1876891**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	98.0	85	115			

Sample ID	**LLLCS-41820**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **41820**			RunNo: **56188**					
Prep Date:	**11/30/2018**	Analysis Date: **12/7/2018**			SeqNo: **1876899**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0080	0.010	0.005000	0	160	50	150			JS

Sample ID	**MB-42160**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890805**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID	**LCS-42160**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890809**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	**LLLCS-42160**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890811**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0075	0.010	0.005000	0	151	50	150			JS

Sample ID	**MB-42189**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **42189**			RunNo: **56532**					
Prep Date:	**12/18/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890813**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LCS-42189**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **42189**			RunNo: **56532**					
Prep Date:	**12/18/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890820**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	97.7	85	115			

Sample ID	**LLLCS-42189**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **42189**			RunNo: **56532**					
Prep Date:	**12/18/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890825**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0084	0.010	0.005000	0	168	50	150			JS

Sample ID	**1811D80-012FMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**DUPLICATE**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890848**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0.01395	97.7	70	130			

Sample ID	**1811D80-012FMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**DUPLICATE**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890849**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0.01395	97.5	70	130	0.236	20	

Sample ID	**MB-42189**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **42189**			RunNo: **56636**					
Prep Date:	**12/18/2018**	Analysis Date: **12/27/2018**			SeqNo: **1894757**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID	**LCS-42189**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **42189**			RunNo: **56636**					
Prep Date:	**12/18/2018**	Analysis Date: **12/27/2018**			SeqNo: **1894759**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LLLCS-42189**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**42189**		RunNo:	**56636**					
Prep Date:	**12/18/2018**	Analysis Date:	**12/27/2018**		SeqNo:	**1894763**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc		0.0086	0.010	0.005000	0	172	50	150			JS

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**1811D80-011GMS**	SampType:	**MS**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**MKTF-35**	Batch ID:	**C56135**		RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**		SeqNo:	**1875349**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.028	0.0010	0.02500	0	112	70	130			
Lead		0.012	0.00050	0.01250	0	94.7	70	130			
Selenium		0.027	0.0010	0.02500	0	107	70	130			

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C56135**		RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**		SeqNo:	**1875360**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Lead		ND	0.00050								
Selenium		ND	0.0010								

Sample ID	**LLLCS**	SampType:	**LCSLL**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C56135**		RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**		SeqNo:	**1875361**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.00098	0.0010	0.001000	0	97.7	50	150			J
Lead		0.00046	0.00050	0.0005000	0	92.9	50	150			J
Selenium		0.00098	0.0010	0.001000	0	98.3	50	150			J

Sample ID	**LCS**	SampType:	**LCS**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C56135**		RunNo:	**56135**					
Prep Date:		Analysis Date:	**12/6/2018**		SeqNo:	**1875362**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		0.026	0.0010	0.02500	0	102	85	115			
Lead		0.012	0.00050	0.01250	0	99.5	85	115			
Selenium		0.025	0.0010	0.02500	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41820**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID: **41820**	RunNo: **56099**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1873859** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41820**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**BatchQC**	Batch ID: **41820**	RunNo: **56099**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1873861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	103	50	150			
Lead	0.00050	0.00050	0.0005000	0	99.7	50	150			J
Selenium	0.0010	0.0010	0.001000	0	103	50	150			

Sample ID	**MSLCS-41820**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID:	**LCSW**	Batch ID: **41820**	RunNo: **56099**
Prep Date:	**11/30/2018**	Analysis Date: **12/5/2018**	SeqNo: **1873863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0	109	85	115			
Lead	0.013	0.00050	0.01250	0	105	85	115			
Selenium	0.027	0.0010	0.02500	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55951**	RunNo: **55951**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55951**	RunNo: **55951**
Prep Date:	Analysis Date: **11/29/2018**	SeqNo: **1868473** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Chloride	4.8	0.50	5.000	0	96.4	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	98.8	90	110			
Bromide	2.4	0.10	2.500	0	97.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.8	90	110			
Sulfate	9.9	0.50	10.00	0	99.3	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R56076**	RunNo: **56076**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872728** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R56076**	RunNo: **56076**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41941**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41941**	RunNo:	**56195**					
Prep Date:	**12/7/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1877195**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41941**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41941**	RunNo:	**56195**					
Prep Date:	**12/7/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1877197**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.096	0.010	0.1000	0	96.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-41801**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41801**	RunNo: **55975**
Prep Date: **11/29/2018**	Analysis Date: **11/30/2018**	SeqNo: **1870056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		110	76.7	135			

Sample ID **LCS-41801**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41801**	RunNo: **55975**
Prep Date: **11/29/2018**	Analysis Date: **11/30/2018**	SeqNo: **1870057** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	89.5	70	130			
Surr: DNOP	0.50		0.5000		99.2	76.7	135			

Sample ID **1811D80-013BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-18**	Batch ID: **41801**	RunNo: **55975**
Prep Date: **11/29/2018**	Analysis Date: **11/30/2018**	SeqNo: **1870078** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	108	82.8	143			
Surr: DNOP	0.52		0.5000		103	76.7	135			

Sample ID **1811D80-013BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-18**	Batch ID: **41801**	RunNo: **55975**
Prep Date: **11/29/2018**	Analysis Date: **11/30/2018**	SeqNo: **1870079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	109	82.8	143	0.919	20	
Surr: DNOP	0.53		0.5000		106	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W55986**	RunNo: **55986**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869564** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.1	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W55986**	RunNo: **55986**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869565** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	101	77.7	130			
Surr: BFB	21		20.00		105	72.8	125			

Sample ID **1811D80-004AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-9**	Batch ID: **W55986**	RunNo: **55986**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869568** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	1.0	10.00	9.132	106	65.4	140			
Surr: BFB	450		400.0		112	72.8	125			

Sample ID **1811D80-004AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-9**	Batch ID: **W55986**	RunNo: **55986**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	1.0	10.00	9.132	103	65.4	140	1.71	20	
Surr: BFB	430		400.0		108	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871106** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	19	1.0	20.00	0	97.0	70	130			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.5		10.00		94.7	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871109** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871109** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871109** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.5	70	130			

Sample ID **1811D80-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-2**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871114** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	6000	10	200.0	5574	220	70	130			ES
Toluene	290	10	200.0	81.86	105	70	130			
Chlorobenzene	200	10	200.0	0	100	70	130			
1,1-Dichloroethene	230	10	200.0	7.020	112	67.6	130			
Trichloroethene (TCE)	220	10	200.0	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	110		100.0		107	70	130			
Surr: 4-Bromofluorobenzene	110		100.0		107	70	130			
Surr: Dibromofluoromethane	100		100.0		100	70	130			
Surr: Toluene-d8	94		100.0		94.5	70	130			

Sample ID **1811D80-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-2**	Batch ID: **R56045**	RunNo: **56045**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1871115** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	5700	10	200.0	5574	83.1	70	130	4.65	20	E
Toluene	290	10	200.0	81.86	102	70	130	2.27	20	
Chlorobenzene	190	10	200.0	0	97.3	70	130	2.68	20	
1,1-Dichloroethene	220	10	200.0	7.020	106	67.6	130	5.03	20	
Trichloroethene (TCE)	210	10	200.0	0	104	70	130	4.24	20	
Surr: 1,2-Dichloroethane-d4	110		100.0		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		101	70	130	0	0	
Surr: Dibromofluoromethane	100		100.0		101	70	130	0	0	
Surr: Toluene-d8	98		100.0		97.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **R56074**	RunNo: **56074**						
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872599**	Units: **%Rec**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **R56074**	RunNo: **56074**						
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872600**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.4	70	130			
Surr: Toluene-d8	9.2		10.00		92.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **1811d80-003dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-2**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	68.3	15	123			
4-Chloro-3-methylphenol	170	10	200.0	0	86.8	26.6	118			
2-Chlorophenol	150	10	200.0	0	76.6	15	120			
1,4-Dichlorobenzene	43	10	100.0	0	43.1	19	108			
2,4-Dinitrotoluene	79	10	100.0	0	79.2	27.8	103			
N-Nitrosodi-n-propylamine	95	10	100.0	0	95.3	32.3	126			
4-Nitrophenol	51	10	200.0	0	25.4	15	72.1			
Pentachlorophenol	140	20	200.0	0	70.9	15	114			
Phenol	110	10	200.0	13.64	47.1	15	67.5			
Pyrene	85	10	100.0	0	84.7	31.2	112			
1,2,4-Trichlorobenzene	50	10	100.0	0	49.8	22.1	123			
Surr: 2-Fluorophenol	110		200.0		54.6	15	74.1			
Surr: Phenol-d5	95		200.0		47.6	15	59.8			
Surr: 2,4,6-Tribromophenol	180		200.0		90.7	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		67.0	33.2	94			
Surr: 2-Fluorobiphenyl	56		100.0		55.7	34	90.9			
Surr: 4-Terphenyl-d14	120		100.0		120	15	149			

Sample ID **1811d80-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-2**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880810** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	65.5	15	123	4.24	30.5	
4-Chloro-3-methylphenol	150	10	200.0	0	75.5	26.6	118	13.9	50	
2-Chlorophenol	140	10	200.0	0	71.0	15	120	7.67	36.3	
1,4-Dichlorobenzene	39	10	100.0	0	39.1	19	108	9.68	42.1	
2,4-Dinitrotoluene	67	10	100.0	0	67.2	27.8	103	16.4	28.5	
N-Nitrosodi-n-propylamine	87	10	100.0	0	86.9	32.3	126	9.18	25.4	
4-Nitrophenol	46	10	200.0	0	23.0	15	72.1	10.0	50	
Pentachlorophenol	130	20	200.0	0	66.4	15	114	6.48	50	
Phenol	100	10	200.0	13.64	44.0	15	67.5	5.99	46.1	
Pyrene	79	10	100.0	0	79.2	31.2	112	6.73	34.3	
1,2,4-Trichlorobenzene	47	10	100.0	0	47.4	22.1	123	4.93	43.6	
Surr: 2-Fluorophenol	100		200.0		52.4	15	74.1	0	0	
Surr: Phenol-d5	85		200.0		42.5	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		87.1	22.1	112	0	0	
Surr: Nitrobenzene-d5	65		100.0		65.1	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	54		100.0		54.5	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **1811d80-003dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-2**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880810** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	110		100.0		109	15	149	0	0	

Sample ID **lcs-41855**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880823** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.2	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	57	115			
2-Chlorophenol	140	10	200.0	0	68.6	43.4	112			
1,4-Dichlorobenzene	59	10	100.0	0	58.6	38	95.2			
2,4-Dinitrotoluene	76	10	100.0	0	75.5	55.1	96.7			
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.8	55	112			
4-Nitrophenol	140	10	200.0	0	68.4	16.6	93			
Pentachlorophenol	150	20	200.0	0	75.0	43.2	104			
Phenol	110	10	200.0	0	56.0	21.3	85.7			
Pyrene	85	10	100.0	0	85.2	64.9	105			
1,2,4-Trichlorobenzene	62	10	100.0	0	62.4	42.6	107			
Surr: 2-Fluorophenol	130		200.0		62.7	15	74.1			
Surr: Phenol-d5	110		200.0		57.3	15	59.8			
Surr: 2,4,6-Tribromophenol	170		200.0		86.6	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		67.4	33.2	94			
Surr: 2-Fluorobiphenyl	63		100.0		63.5	34	90.9			
Surr: 4-Terphenyl-d14	120		100.0		117	15	149			

Sample ID **mb-41855**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880824** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41855**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880824** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	16	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811D80**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41855**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **41855**		RunNo: **56284**		
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**		SeqNo: **1880824**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		71.0	15	74.1			
Surr: Phenol-d5	120		200.0		59.8	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		73.9	22.1	112			
Surr: Nitrobenzene-d5	75		100.0		75.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		67.9	34	90.9			
Surr: 4-Terphenyl-d14	110		100.0		114	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811D80** RcptNo: **1**

Received By: **Isaiah Ortiz** **11/28/2018 3:55:00 PM** I

Completed By: **Erin Melendrez** **11/28/2018 4:17:08 PM**

Reviewed By: VVZ 11/28/18 ~~VVZ 11/29/18~~ VVZ 11/29/18 ENM 11/29/18

LB: ~~300-WJ ENM 11/28/18~~ LB: VVZ 11/29/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐ 11 (2) NO ENM 11/28/18
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 22 (2) or >12 unless noted)
Adjusted? NO
Checked by: ENM 11/29/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.8	Good	Yes			
2	2.9	Good	Yes			
3	5.6	Good	Yes			
4	2.5	Good	Yes			

Chain-of-Custody Record

Client:	Marathon Petroleum
	GALLUP REFINERY
Mailing Address:	92 GIANT CROSSING ROAD, GALLUP, NM 87301
Phone #:	505-722-3833
Email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other
☐ EDD (Type)	

Turn-Around Time:	X Standard ☐ Rush
Project Name:	2018 4th Qtr GW Sampling
	MKTF Wells
Project Manager:	C JOHNSON
	(CAJohnson1@Marathonpetroleum.com)
Sampler:	C. JOHNSON
On Ice:	Yes ☐ No
Sample Temperature:	See Remarks

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811D80	8260+MTBE	8015D EXTENDED(DRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011/504.1 FOR EDB	CYANIDE	Air Bubbles (Y or N)
11/28/2018	700	AQUEOUS	Field Blank	3-40ml VOAs	HCL	-001	X								
11/28/2018	700	AQUEOUS	Trip Blank	3-40ml VOAs	HCL	-002	X								
11/28/2018	1104	AQUEOUS	MKTF-2	MISC	MISC	-003	X	X	2	X	X	X	X		
11/28/2018	1135	AQUEOUS	MKTF-9	MISC	MISC	-004	X	X	X	X	X	X			
11/28/2018	0935	AQUEOUS	MKTF-13	MISC	MISC	-005	X	X	X	X	X	X			
11/28/2018	0846	AQUEOUS	MKTF-17	MISC	MISC	-006	X	X	X	X	X	X			
11/28/2018	0825	AQUEOUS	MKTF-19	MISC	MISC	-007	X	X	X	X	X	X	X		
11/28/2018	1002	AQUEOUS	MKTF-22	MISC	MISC	-008	X	X	X	X	X	X			
11/28/2018	1020	AQUEOUS	MKTF-33	MISC	MISC	-009	X	X	X	X	X	X	X		
11/28/2018	904	AQUEOUS	MKTF-34	MISC	MISC	-010	X	X	X	X	X	X	X		
11/28/2018	1218	AQUEOUS	MKTF-35	MISC	MISC	-011	X	X	X	X	X	X	X		
11/28/2018	1028	AQUEOUS	DUPLICATE	MISC	MISC	-012	X	X	X	X	X	X	X		
11/28/18	1250		MKTF-18			-013	X	X	X	X	X	X	X		

Date: 11/28/18	Time: 1325	Relinquished by:	Received by:	Date 11/28/18	Time 1340
Date: 11/28/18	Time: 1555	Relinquished by:	Received by: client	Date 11/28/18	Time 1555

Analysis Request

Remarks: WQCC METALS TO INCLUDE RCRA 8 METALS MINUS URANIUM, INCLUDES MERCURY

Duplicate (2) 8270 - VV2 11/29/18

4 coolers w/Temps of - 1)7.8 2)2.9 3)5.6 4)2.5

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Cheryl Johnson

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2018 4th Qtr GW Sampling OrderNo.: 1811E76

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/30/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811E76**
Date Reported: **1/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 7:00:00 AM
Lab ID: 1811E76-001
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Toluene	0.28	0.17	1.0	J	µg/L	1	12/4/2018 4:25:00 PM	R56074
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Naphthalene	ND	0.29	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Acetone	ND	0.76	10		µg/L	1	12/4/2018 4:25:00 PM	R56074
Bromobenzene	ND	0.32	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Bromoform	ND	0.32	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Bromomethane	ND	0.27	3.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
2-Butanone	ND	1.4	10		µg/L	1	12/4/2018 4:25:00 PM	R56074
Carbon disulfide	ND	0.39	10		µg/L	1	12/4/2018 4:25:00 PM	R56074
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Chloroethane	ND	0.16	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Chloroform	ND	0.24	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Chloromethane	ND	0.32	3.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Dibromomethane	ND	0.32	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 7:00:00 AM
Lab ID: 1811E76-001
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
2-Hexanone	ND	0.91	10		µg/L	1	12/4/2018 4:25:00 PM	R56074
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/4/2018 4:25:00 PM	R56074
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Styrene	ND	0.25	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/4/2018 4:25:00 PM	R56074
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/4/2018 4:25:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	118	0	70-130		%Rec	1	12/4/2018 4:25:00 PM	R56074
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	12/4/2018 4:25:00 PM	R56074
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	12/4/2018 4:25:00 PM	R56074
Surr: Toluene-d8	92.8	0	70-130		%Rec	1	12/4/2018 4:25:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811E76-002
Matrix: TRIP BLANK
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	12/5/2018 1:58:15 PM	G56109
Surr: BFB	89.1	0	72.8-125		%Rec	1	12/5/2018 1:58:15 PM	G56109
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Toluene	ND	0.17	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Naphthalene	ND	0.29	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Acetone	ND	0.76	10		µg/L	1	12/4/2018 4:49:00 PM	R56074
Bromobenzene	ND	0.32	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Bromoform	ND	0.32	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Bromomethane	ND	0.27	3.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
2-Butanone	ND	1.4	10		µg/L	1	12/4/2018 4:49:00 PM	R56074
Carbon disulfide	ND	0.39	10		µg/L	1	12/4/2018 4:49:00 PM	R56074
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Chloroethane	ND	0.16	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Chloroform	ND	0.24	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Chloromethane	ND	0.32	3.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Dibromomethane	ND	0.32	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1811E76-002
Matrix: TRIP BLANK
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
2-Hexanone	ND	0.91	10		µg/L	1	12/4/2018 4:49:00 PM	R56074
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/4/2018 4:49:00 PM	R56074
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Styrene	ND	0.25	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/4/2018 4:49:00 PM	R56074
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/4/2018 4:49:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	12/4/2018 4:49:00 PM	R56074
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	12/4/2018 4:49:00 PM	R56074
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	1	12/4/2018 4:49:00 PM	R56074
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	12/4/2018 4:49:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.6	0.63	1.0		mg/L	1	12/5/2018 5:38:30 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 5:38:30 PM	41893
Surr: DNOP	120	0	76.7-135		%Rec	1	12/5/2018 5:38:30 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	34	1.2	2.5		mg/L	50	12/5/2018 2:20:58 PM	G56109
Surr: BFB	93.9	0	72.8-125		%Rec	50	12/5/2018 2:20:58 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.4	0.50	0.50		mg/L	5	11/30/2018 3:58:43 PM	R56016
Chloride	620	25	25	*	mg/L	50	12/5/2018 12:01:42 AM	R56075
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 3:58:43 PM	R56016
Bromide	2.1	0.10	0.50		mg/L	5	11/30/2018 3:58:43 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 3:58:43 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 3:58:43 PM	R56016
Sulfate	0.64	0.63	2.5	J	mg/L	5	11/30/2018 3:58:43 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	1.4	0.0099	0.020		mg/L	10	12/29/2018 3:46:36 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 3:40:26 PM	C56663
Calcium	72	0.78	10		mg/L	10	12/29/2018 3:46:36 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 3:40:26 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 3:40:26 PM	C56663
Iron	2.7	0.16	0.20	*	mg/L	10	12/29/2018 3:46:36 PM	C56663
Magnesium	19	0.25	1.0		mg/L	1	12/29/2018 3:40:26 PM	C56663
Manganese	1.5	0.0039	0.020	*	mg/L	10	12/29/2018 3:46:36 PM	C56663
Potassium	1.2	0.11	1.0		mg/L	1	12/29/2018 3:40:26 PM	C56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 3:40:26 PM	C56663
Sodium	660	1.6	10		mg/L	10	12/29/2018 3:46:36 PM	C56663
Zinc	0.031	0.0021	0.010		mg/L	1	12/29/2018 3:40:26 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	1.4	0.0050	0.010		mg/L	5	12/19/2018 11:25:04 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 3:47:30 PM	41848
Chromium	ND	0.0018	0.0060		mg/L	1	12/13/2018 3:47:30 PM	41848
Copper	0.0065	0.0041	0.0060		mg/L	1	12/13/2018 3:47:30 PM	41848
Iron	4.1	0.051	0.10	*	mg/L	5	12/19/2018 11:25:04 A	41848
Manganese	1.5	0.0055	0.010	*	mg/L	5	12/19/2018 11:25:04 A	41848
Silver	0.0027	0.0012	0.0050	J	mg/L	1	12/13/2018 3:47:30 PM	41848
Zinc	0.023	0.0033	0.010		mg/L	1	12/21/2018 9:25:18 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.015	0.00042	0.0010	*	mg/L	1	12/12/2018 3:56:34 PM	B56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 3:56:34 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 3:56:34 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.018	0.00041	0.0010	*	mg/L	1	12/7/2018 1:12:03 PM	41848
Lead	0.0021	0.00023	0.00050		mg/L	1	12/7/2018 1:12:03 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:12:03 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000065	0.000038	0.00020	J	mg/L	1	12/13/2018 12:39:09 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 11:15:54 A	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 11:15:54 A	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 11:15:54 A	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
Benzoic acid	32	6.3	20		µg/L	1	12/14/2018 11:15:54 A	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 11:15:54 A	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 11:15:54 A	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 11:15:54 A	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 11:15:54 A	41855
2,4-Dimethylphenol	17	5.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 11:15:54 A	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 11:15:54 A	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 11:15:54 A	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 11:15:54 A	41855
1-Methylnaphthalene	14	7.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Methylnaphthalene	18	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Methylphenol	13	6.3	10		µg/L	1	12/14/2018 11:15:54 A	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 11:15:54 A	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 11:15:54 A	41855
Naphthalene	62	5.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 11:15:54 A	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 11:15:54 A	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 11:15:54 A	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Phenol	150	6.0	10		µg/L	1	12/14/2018 11:15:54 A	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 11:15:54 A	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 11:15:54 A	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 11:15:54 A	41855
Surr: 2-Fluorophenol	33.3	0	15-74.1		%Rec	1	12/14/2018 11:15:54 A	41855
Surr: Phenol-d5	42.0	0	15-59.8		%Rec	1	12/14/2018 11:15:54 A	41855
Surr: 2,4,6-Tribromophenol	81.8	0	22.1-112		%Rec	1	12/14/2018 11:15:54 A	41855
Surr: Nitrobenzene-d5	73.7	0	33.2-94		%Rec	1	12/14/2018 11:15:54 A	41855
Surr: 2-Fluorobiphenyl	65.0	0	34-90.9		%Rec	1	12/14/2018 11:15:54 A	41855
Surr: 4-Terphenyl-d14	104	0	15-149		%Rec	1	12/14/2018 11:15:54 A	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	17000	170	1000		µg/L	1E+	12/4/2018 5:13:00 PM	R56074
Toluene	120	17	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Ethylbenzene	890	22	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Methyl tert-butyl ether (MTBE)	690	46	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2,4-Trimethylbenzene	390	25	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,3,5-Trimethylbenzene	36	23	100	J	µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	19	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	23	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Naphthalene	89	29	200	J	µg/L	100	12/4/2018 5:37:00 PM	R56074
1-Methylnaphthalene	ND	34	400		µg/L	100	12/4/2018 5:37:00 PM	R56074
2-Methylnaphthalene	ND	35	400		µg/L	100	12/4/2018 5:37:00 PM	R56074
Acetone	ND	76	1000		µg/L	100	12/4/2018 5:37:00 PM	R56074
Bromobenzene	ND	32	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Bromodichloromethane	ND	28	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Bromoform	ND	32	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Bromomethane	ND	27	300		µg/L	100	12/4/2018 5:37:00 PM	R56074
2-Butanone	ND	140	1000		µg/L	100	12/4/2018 5:37:00 PM	R56074
Carbon disulfide	ND	39	1000		µg/L	100	12/4/2018 5:37:00 PM	R56074
Carbon Tetrachloride	ND	14	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Chlorobenzene	ND	29	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Chloroethane	ND	16	200		µg/L	100	12/4/2018 5:37:00 PM	R56074
Chloroform	ND	24	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Chloromethane	ND	32	300		µg/L	100	12/4/2018 5:37:00 PM	R56074
2-Chlorotoluene	ND	25	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
4-Chlorotoluene	ND	28	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
cis-1,2-DCE	ND	38	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
cis-1,3-Dichloropropene	ND	30	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	47	200		µg/L	100	12/4/2018 5:37:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	24	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Dibromomethane	ND	32	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2-Dichlorobenzene	ND	31	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,3-Dichlorobenzene	ND	31	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,4-Dichlorobenzene	ND	29	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Dichlorodifluoromethane	ND	26	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1-Dichloroethane	ND	18	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1-Dichloroethene	ND	12	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2-Dichloropropane	ND	17	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,3-Dichloropropane	ND	27	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
2,2-Dichloropropane	ND	23	200		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1-Dichloropropene	ND	16	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Hexachlorobutadiene	ND	39	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
2-Hexanone	ND	91	1000		µg/L	100	12/4/2018 5:37:00 PM	R56074
Isopropylbenzene	ND	22	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
4-Isopropyltoluene	ND	24	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
4-Methyl-2-pentanone	ND	45	1000		µg/L	100	12/4/2018 5:37:00 PM	R56074
Methylene Chloride	ND	21	300		µg/L	100	12/4/2018 5:37:00 PM	R56074
n-Butylbenzene	ND	25	300		µg/L	100	12/4/2018 5:37:00 PM	R56074
n-Propylbenzene	42	24	100	J	µg/L	100	12/4/2018 5:37:00 PM	R56074
sec-Butylbenzene	ND	20	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Styrene	ND	25	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
tert-Butylbenzene	ND	22	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	25	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	33	200		µg/L	100	12/4/2018 5:37:00 PM	R56074
Tetrachloroethene (PCE)	ND	15	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
trans-1,2-DCE	ND	18	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
trans-1,3-Dichloropropene	ND	28	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2,3-Trichlorobenzene	ND	28	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2,4-Trichlorobenzene	ND	27	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1,1-Trichloroethane	ND	16	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,1,2-Trichloroethane	ND	23	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Trichloroethene (TCE)	ND	26	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Trichlorofluoromethane	ND	14	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
1,2,3-Trichloropropane	ND	57	200		µg/L	100	12/4/2018 5:37:00 PM	R56074
Vinyl chloride	ND	12	100		µg/L	100	12/4/2018 5:37:00 PM	R56074
Xylenes, Total	720	64	150		µg/L	100	12/4/2018 5:37:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	100	12/4/2018 5:37:00 PM	R56074
Surr: 4-Bromofluorobenzene	112	0	70-130		%Rec	100	12/4/2018 5:37:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-16
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:00:00 PM
Lab ID: 1811E76-003
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	106	0	70-130		%Rec	100	12/4/2018 5:37:00 PM	R56074
Surr: Toluene-d8	101	0	70-130		%Rec	100	12/4/2018 5:37:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.9	0.63	1.0		mg/L	1	12/5/2018 6:02:42 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 6:02:42 PM	41893
Surr: DNOP	121	0	76.7-135		%Rec	1	12/5/2018 6:02:42 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	17	0.12	0.25		mg/L	5	12/5/2018 3:29:08 PM	G56109
Surr: BFB	110	0	72.8-125		%Rec	5	12/5/2018 3:29:08 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	4.2	0.50	0.50	*	mg/L	5	11/30/2018 4:23:32 PM	R56016
Chloride	460	25	25	*	mg/L	50	12/5/2018 12:14:06 AM	R56075
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 4:23:32 PM	R56016
Bromide	1.6	0.10	0.50		mg/L	5	11/30/2018 4:23:32 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 4:23:32 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 4:23:32 PM	R56016
Sulfate	4.3	0.63	2.5		mg/L	5	11/30/2018 4:23:32 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.9	0.0049	0.010	*	mg/L	5	12/29/2018 3:50:46 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 3:48:43 PM	C56663
Calcium	160	0.39	5.0		mg/L	5	12/29/2018 3:50:46 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 3:48:43 PM	C56663
Copper	0.0059	0.0032	0.0060	J	mg/L	1	12/29/2018 3:48:43 PM	C56663
Iron	2.5	0.082	0.10	*	mg/L	5	12/29/2018 3:50:46 PM	C56663
Magnesium	33	0.25	1.0		mg/L	1	12/29/2018 3:48:43 PM	C56663
Manganese	2.5	0.0020	0.010	*	mg/L	5	12/29/2018 3:50:46 PM	C56663
Potassium	10	0.11	1.0		mg/L	1	12/29/2018 3:48:43 PM	C56663
Silver	0.0026	0.0018	0.0050	J	mg/L	1	12/29/2018 3:48:43 PM	C56663
Sodium	330	0.82	5.0		mg/L	5	12/29/2018 3:50:46 PM	C56663
Zinc	0.061	0.0021	0.010		mg/L	1	12/29/2018 3:48:43 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	5.5	0.010	0.020	*	mg/L	10	12/19/2018 11:27:10 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 3:58:04 PM	41848
Chromium	ND	0.0018	0.0060		mg/L	1	12/13/2018 3:58:04 PM	41848
Copper	0.095	0.0041	0.0060		mg/L	1	12/13/2018 3:58:04 PM	41848
Iron	8.0	0.10	0.20	*	mg/L	10	12/19/2018 11:27:10 A	41848
Manganese	2.6	0.011	0.020	*	mg/L	10	12/19/2018 11:27:10 A	41848
Silver	0.0045	0.0012	0.0050	J	mg/L	1	12/13/2018 3:58:04 PM	41848
Zinc	0.26	0.0033	0.010		mg/L	1	12/21/2018 9:27:12 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.019	0.00042	0.0010	*	mg/L	1	12/12/2018 3:59:07 PM	B56272
Lead	0.00078	0.00017	0.00050		mg/L	1	12/12/2018 3:59:07 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 3:59:07 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.025	0.00041	0.0010	*	mg/L	1	12/7/2018 1:13:59 PM	41848
Lead	0.0047	0.00023	0.00050		mg/L	1	12/7/2018 1:13:59 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:13:59 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000049	0.000038	0.00020	J	mg/L	1	12/13/2018 12:41:25 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 11:45:02 A	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 11:45:02 A	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 11:45:02 A	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
Benzoic acid	23	6.3	20		µg/L	1	12/14/2018 11:45:02 A	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 11:45:02 A	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
Bis(2-ethylhexyl)phthalate	12	8.1	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 11:45:02 A	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 11:45:02 A	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 11:45:02 A	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 11:45:02 A	41855
2,4-Dimethylphenol	240	5.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 11:45:02 A	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 11:45:02 A	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 11:45:02 A	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 11:45:02 A	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 11:45:02 A	41855
1-Methylnaphthalene	11	7.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
2-Methylnaphthalene	6.3	6.3	10	J	µg/L	1	12/14/2018 11:45:02 A	41855
2-Methylphenol	9.5	6.3	10	J	µg/L	1	12/14/2018 11:45:02 A	41855
3+4-Methylphenol	16	5.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 11:45:02 A	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 11:45:02 A	41855
Naphthalene	31	5.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 11:45:02 A	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 11:45:02 A	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 11:45:02 A	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Phenol	28	6.0	10		µg/L	1	12/14/2018 11:45:02 A	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 11:45:02 A	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 11:45:02 A	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 11:45:02 A	41855
Surr: 2-Fluorophenol	12.1	0	15-74.1	S	%Rec	1	12/14/2018 11:45:02 A	41855
Surr: Phenol-d5	19.5	0	15-59.8		%Rec	1	12/14/2018 11:45:02 A	41855
Surr: 2,4,6-Tribromophenol	36.1	0	22.1-112		%Rec	1	12/14/2018 11:45:02 A	41855
Surr: Nitrobenzene-d5	41.2	0	33.2-94		%Rec	1	12/14/2018 11:45:02 A	41855
Surr: 2-Fluorobiphenyl	21.8	0	34-90.9	S	%Rec	1	12/14/2018 11:45:02 A	41855
Surr: 4-Terphenyl-d14	36.6	0	15-149		%Rec	1	12/14/2018 11:45:02 A	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	3000	17	100		µg/L	100	12/4/2018 7:12:00 PM	R56074
Toluene	20	1.7	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Ethylbenzene	120	2.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Methyl tert-butyl ether (MTBE)	26	4.6	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2,4-Trimethylbenzene	530	2.5	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,3,5-Trimethylbenzene	220	2.3	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Naphthalene	73	2.9	20		µg/L	10	12/5/2018 11:33:00 AM	A56074
1-Methylnaphthalene	13	3.4	40	J	µg/L	10	12/5/2018 11:33:00 AM	A56074
2-Methylnaphthalene	14	3.5	40	J	µg/L	10	12/5/2018 11:33:00 AM	A56074
Acetone	ND	7.6	100		µg/L	10	12/5/2018 11:33:00 AM	A56074
Bromobenzene	ND	3.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Bromodichloromethane	ND	2.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Bromoform	ND	3.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Bromomethane	ND	2.7	30		µg/L	10	12/5/2018 11:33:00 AM	A56074
2-Butanone	ND	14	100		µg/L	10	12/5/2018 11:33:00 AM	A56074
Carbon disulfide	ND	3.9	100		µg/L	10	12/5/2018 11:33:00 AM	A56074
Carbon Tetrachloride	ND	1.4	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Chlorobenzene	ND	2.9	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Chloroethane	ND	1.6	20		µg/L	10	12/5/2018 11:33:00 AM	A56074
Chloroform	ND	2.4	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Chloromethane	ND	3.2	30		µg/L	10	12/5/2018 11:33:00 AM	A56074
2-Chlorotoluene	ND	2.5	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
4-Chlorotoluene	ND	2.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
cis-1,2-DCE	ND	3.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	12/5/2018 11:33:00 AM	A56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	2.4	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Dibromomethane	ND	3.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1-Dichloroethane	ND	1.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1-Dichloroethene	ND	1.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2-Dichloropropane	ND	1.7	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,3-Dichloropropane	ND	2.7	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
2,2-Dichloropropane	ND	2.3	20		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1-Dichloropropene	ND	1.6	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Hexachlorobutadiene	ND	3.9	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
2-Hexanone	ND	9.1	100		µg/L	10	12/5/2018 11:33:00 AM	A56074
Isopropylbenzene	3.7	2.2	10	J	µg/L	10	12/5/2018 11:33:00 AM	A56074
4-Isopropyltoluene	ND	2.4	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	12/5/2018 11:33:00 AM	A56074
Methylene Chloride	ND	2.1	30		µg/L	10	12/5/2018 11:33:00 AM	A56074
n-Butylbenzene	ND	2.5	30		µg/L	10	12/5/2018 11:33:00 AM	A56074
n-Propylbenzene	8.1	2.4	10	J	µg/L	10	12/5/2018 11:33:00 AM	A56074
sec-Butylbenzene	ND	2.0	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Styrene	ND	2.5	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
tert-Butylbenzene	ND	2.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	12/5/2018 11:33:00 AM	A56074
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
trans-1,2-DCE	ND	1.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1,1-Trichloroethane	ND	1.6	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Trichloroethene (TCE)	ND	2.6	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Trichlorofluoromethane	ND	1.4	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	12/5/2018 11:33:00 AM	A56074
Vinyl chloride	ND	1.2	10		µg/L	10	12/5/2018 11:33:00 AM	A56074
Xylenes, Total	2500	6.4	15		µg/L	10	12/5/2018 11:33:00 AM	A56074
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	10	12/5/2018 11:33:00 AM	A56074
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	10	12/5/2018 11:33:00 AM	A56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-20
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:45:00 PM
Lab ID: 1811E76-004
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	89.2	0	70-130		%Rec	10	12/5/2018 11:33:00 AM	A56074
Surr: Toluene-d8	91.7	0	70-130		%Rec	10	12/5/2018 11:33:00 AM	A56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	3.8	0.63	1.0		mg/L	1	12/5/2018 6:26:47 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 6:26:47 PM	41893
Surr: DNOP	119	0	76.7-135		%Rec	1	12/5/2018 6:26:47 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	7.2	0.24	0.50		mg/L	10	12/5/2018 3:51:56 PM	G56109
Surr: BFB	95.5	0	72.8-125		%Rec	10	12/5/2018 3:51:56 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.89	0.50	0.50		mg/L	5	11/30/2018 4:48:21 PM	R56016
Chloride	340	10	10	*	mg/L	20	11/30/2018 5:00:46 PM	R56016
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 4:48:21 PM	R56016
Bromide	1.9	0.10	0.50		mg/L	5	11/30/2018 4:48:21 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 4:48:21 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 4:48:21 PM	R56016
Sulfate	8.6	0.63	2.5		mg/L	5	11/30/2018 4:48:21 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.4	0.0049	0.010	*	mg/L	5	12/29/2018 3:57:05 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 3:55:02 PM	C56663
Calcium	210	0.39	5.0		mg/L	5	12/29/2018 3:57:05 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 3:55:02 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 3:55:02 PM	C56663
Iron	9.3	0.82	1.0	*	mg/L	50	12/29/2018 4:06:01 PM	C56663
Magnesium	36	0.25	1.0		mg/L	1	12/29/2018 3:55:02 PM	C56663
Manganese	3.6	0.0020	0.010	*	mg/L	5	12/29/2018 3:57:05 PM	C56663
Potassium	20	0.11	1.0		mg/L	1	12/29/2018 3:55:02 PM	C56663
Silver	0.0032	0.0018	0.0050	J	mg/L	1	12/29/2018 3:55:02 PM	C56663
Sodium	210	0.82	5.0		mg/L	5	12/29/2018 3:57:05 PM	C56663
Zinc	0.053	0.0021	0.010		mg/L	1	12/29/2018 3:55:02 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.3	0.0050	0.010	*	mg/L	5	12/19/2018 11:40:15 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 4:00:12 PM	41848
Chromium	ND	0.0018	0.0060		mg/L	1	12/13/2018 4:00:12 PM	41848
Copper	0.022	0.0041	0.0060		mg/L	1	12/13/2018 4:00:12 PM	41848
Iron	29	0.51	1.0	*	mg/L	50	12/19/2018 11:42:27 A	41848
Manganese	4.1	0.0055	0.010	*	mg/L	5	12/19/2018 11:40:15 A	41848
Silver	0.0037	0.0012	0.0050	J	mg/L	1	12/13/2018 4:00:12 PM	41848
Zinc	0.27	0.0033	0.010		mg/L	1	12/21/2018 9:29:06 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	12/12/2018 4:01:31 PM	B56272
Lead	0.00021	0.00017	0.00050	J	mg/L	1	12/12/2018 4:01:31 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 4:01:31 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.020	0.00041	0.0010	*	mg/L	1	12/7/2018 1:15:56 PM	41848
Lead	0.0030	0.00023	0.00050		mg/L	1	12/7/2018 1:15:56 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:15:56 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/13/2018 12:43:41 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 12:13:52 P	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 12:13:52 P	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 12:13:52 P	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
Benzoic acid	ND	6.3	20		µg/L	1	12/14/2018 12:13:52 P	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 12:13:52 P	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
Bis(2-ethylhexyl)phthalate	47	8.1	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 12:13:52 P	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 12:13:52 P	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 12:13:52 P	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 12:13:52 P	41855
2,4-Dimethylphenol	27	5.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 12:13:52 P	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 12:13:52 P	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 12:13:52 P	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 12:13:52 P	41855
1-Methylnaphthalene	12	7.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/14/2018 12:13:52 P	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 12:13:52 P	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 12:13:52 P	41855
Naphthalene	7.7	5.0	10	J	µg/L	1	12/14/2018 12:13:52 P	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 12:13:52 P	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 12:13:52 P	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 12:13:52 P	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 12:13:52 P	41855
Phenol	210	60	100		µg/L	10	12/18/2018 2:30:01 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 12:13:52 P	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 12:13:52 P	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 12:13:52 P	41855
Surr: 2-Fluorophenol	32.8	0	15-74.1		%Rec	1	12/14/2018 12:13:52 P	41855
Surr: Phenol-d5	33.6	0	15-59.8		%Rec	1	12/14/2018 12:13:52 P	41855
Surr: 2,4,6-Tribromophenol	53.7	0	22.1-112		%Rec	1	12/14/2018 12:13:52 P	41855
Surr: Nitrobenzene-d5	62.6	0	33.2-94		%Rec	1	12/14/2018 12:13:52 P	41855
Surr: 2-Fluorobiphenyl	47.4	0	34-90.9		%Rec	1	12/14/2018 12:13:52 P	41855
Surr: 4-Terphenyl-d14	79.2	0	15-149		%Rec	1	12/14/2018 12:13:52 P	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	2000	35	200		µg/L	200	12/4/2018 7:35:00 PM	R56074
Toluene	ND	3.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Ethylbenzene	110	4.5	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Methyl tert-butyl ether (MTBE)	220	9.1	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2,4-Trimethylbenzene	99	5.1	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,3,5-Trimethylbenzene	30	4.6	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Naphthalene	13	5.8	40	J	µg/L	20	12/4/2018 7:59:00 PM	R56074
1-Methylnaphthalene	ND	6.7	80		µg/L	20	12/4/2018 7:59:00 PM	R56074
2-Methylnaphthalene	ND	6.9	80		µg/L	20	12/4/2018 7:59:00 PM	R56074
Acetone	ND	15	200		µg/L	20	12/4/2018 7:59:00 PM	R56074
Bromobenzene	ND	6.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Bromodichloromethane	ND	5.7	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Bromoform	ND	6.5	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Bromomethane	ND	5.5	60		µg/L	20	12/4/2018 7:59:00 PM	R56074
2-Butanone	ND	28	200		µg/L	20	12/4/2018 7:59:00 PM	R56074
Carbon disulfide	ND	7.7	200		µg/L	20	12/4/2018 7:59:00 PM	R56074
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Chlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Chloroethane	ND	3.3	40		µg/L	20	12/4/2018 7:59:00 PM	R56074
Chloroform	ND	4.7	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Chloromethane	ND	6.4	60		µg/L	20	12/4/2018 7:59:00 PM	R56074
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/4/2018 7:59:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Dibromomethane	ND	6.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
2-Hexanone	ND	18	200		µg/L	20	12/4/2018 7:59:00 PM	R56074
Isopropylbenzene	4.8	4.4	20	J	µg/L	20	12/4/2018 7:59:00 PM	R56074
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/4/2018 7:59:00 PM	R56074
Methylene Chloride	ND	4.1	60		µg/L	20	12/4/2018 7:59:00 PM	R56074
n-Butylbenzene	ND	5.0	60		µg/L	20	12/4/2018 7:59:00 PM	R56074
n-Propylbenzene	8.3	4.9	20	J	µg/L	20	12/4/2018 7:59:00 PM	R56074
sec-Butylbenzene	ND	4.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Styrene	ND	5.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/4/2018 7:59:00 PM	R56074
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/4/2018 7:59:00 PM	R56074
Vinyl chloride	ND	2.4	20		µg/L	20	12/4/2018 7:59:00 PM	R56074
Xylenes, Total	140	13	30		µg/L	20	12/4/2018 7:59:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	97.0	0	70-130		%Rec	20	12/4/2018 7:59:00 PM	R56074
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	20	12/4/2018 7:59:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: MKTF-21
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 1:20:00 PM
Lab ID: 1811E76-005
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	93.8	0	70-130		%Rec	20	12/4/2018 7:59:00 PM	R56074
Surr: Toluene-d8	94.2	0	70-130		%Rec	20	12/4/2018 7:59:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	8.6	0.63	1.0		mg/L	1	12/5/2018 6:50:44 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 6:50:44 PM	41893
Surr: DNOP	123	0	76.7-135		%Rec	1	12/5/2018 6:50:44 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	0.49	1.0		mg/L	20	12/5/2018 4:14:41 PM	G56109
Surr: BFB	97.1	0	72.8-125		%Rec	20	12/5/2018 4:14:41 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/30/2018 5:38:00 PM	R56016
Chloride	160	10	10		mg/L	20	11/30/2018 5:50:25 PM	R56016
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 5:38:00 PM	R56016
Bromide	2.3	0.10	0.50		mg/L	5	11/30/2018 5:38:00 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 5:38:00 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 5:38:00 PM	R56016
Sulfate	0.77	0.63	2.5	J	mg/L	5	11/30/2018 5:38:00 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.0	0.0099	0.020	*	mg/L	10	12/29/2018 4:10:23 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 4:08:22 PM	C56663
Calcium	120	0.78	10		mg/L	10	12/29/2018 4:10:23 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 4:08:22 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 4:08:22 PM	C56663
Iron	3.4	0.16	0.20	*	mg/L	10	12/29/2018 4:10:23 PM	C56663
Magnesium	18	0.25	1.0		mg/L	1	12/29/2018 4:08:22 PM	C56663
Manganese	2.3	0.0039	0.020	*	mg/L	10	12/29/2018 4:10:23 PM	C56663
Potassium	0.89	0.11	1.0	J	mg/L	1	12/29/2018 4:08:22 PM	C56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 4:08:22 PM	C56663
Sodium	290	1.6	10		mg/L	10	12/29/2018 4:10:23 PM	C56663
Zinc	0.018	0.0021	0.010		mg/L	1	12/29/2018 4:08:22 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.7	0.010	0.020	*	mg/L	10	12/19/2018 11:44:33 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 4:02:23 PM	41848
Chromium	ND	0.0018	0.0060		mg/L	1	12/13/2018 4:02:23 PM	41848
Copper	ND	0.0041	0.0060		mg/L	1	12/13/2018 4:02:23 PM	41848
Iron	6.9	0.10	0.20	*	mg/L	10	12/19/2018 11:44:33 A	41848
Manganese	2.6	0.011	0.020	*	mg/L	10	12/19/2018 11:44:33 A	41848
Silver	0.0035	0.0012	0.0050	J	mg/L	1	12/13/2018 4:02:23 PM	41848
Zinc	0.0033	0.0033	0.010	J	mg/L	1	12/13/2018 4:02:23 PM	41848
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0040	0.00042	0.0010		mg/L	1	12/12/2018 4:03:56 PM	B56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 4:03:56 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 4:03:56 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0051	0.00041	0.0010		mg/L	1	12/7/2018 1:18:00 PM	41848
Lead	0.00088	0.00023	0.00050		mg/L	1	12/7/2018 1:18:00 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:18:00 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/13/2018 12:45:57 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 12:42:51 P	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 12:42:51 P	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 12:42:51 P	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
Benzoic acid	37	6.3	20		µg/L	1	12/14/2018 12:42:51 P	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 12:42:51 P	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 12:42:51 P	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 12:42:51 P	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 12:42:51 P	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 12:42:51 P	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 12:42:51 P	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 12:42:51 P	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 12:42:51 P	41855
1-Methylnaphthalene	54	7.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Methylnaphthalene	13	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/14/2018 12:42:51 P	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 12:42:51 P	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 12:42:51 P	41855
Naphthalene	51	5.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 12:42:51 P	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 12:42:51 P	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 12:42:51 P	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Phenol	24	6.0	10		µg/L	1	12/14/2018 12:42:51 P	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 12:42:51 P	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 12:42:51 P	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 12:42:51 P	41855
Surr: 2-Fluorophenol	23.8	0	15-74.1		%Rec	1	12/14/2018 12:42:51 P	41855
Surr: Phenol-d5	20.6	0	15-59.8		%Rec	1	12/14/2018 12:42:51 P	41855
Surr: 2,4,6-Tribromophenol	39.0	0	22.1-112		%Rec	1	12/14/2018 12:42:51 P	41855
Surr: Nitrobenzene-d5	37.1	0	33.2-94		%Rec	1	12/14/2018 12:42:51 P	41855
Surr: 2-Fluorobiphenyl	29.4	0	34-90.9	S	%Rec	1	12/14/2018 12:42:51 P	41855
Surr: 4-Terphenyl-d14	56.3	0	15-149		%Rec	1	12/14/2018 12:42:51 P	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	35	200		µg/L	200	12/4/2018 8:22:00 PM	R56074
Toluene	61	3.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Ethylbenzene	510	4.5	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Methyl tert-butyl ether (MTBE)	100	9.1	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Naphthalene	120	5.8	40		µg/L	20	12/4/2018 8:46:00 PM	R56074
1-Methylnaphthalene	82	6.7	80		µg/L	20	12/4/2018 8:46:00 PM	R56074
2-Methylnaphthalene	24	6.9	80	J	µg/L	20	12/4/2018 8:46:00 PM	R56074
Acetone	ND	15	200		µg/L	20	12/4/2018 8:46:00 PM	R56074
Bromobenzene	ND	6.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Bromodichloromethane	ND	5.7	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Bromoform	ND	6.5	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Bromomethane	ND	5.5	60		µg/L	20	12/4/2018 8:46:00 PM	R56074
2-Butanone	ND	28	200		µg/L	20	12/4/2018 8:46:00 PM	R56074
Carbon disulfide	ND	7.7	200		µg/L	20	12/4/2018 8:46:00 PM	R56074
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Chlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Chloroethane	ND	3.3	40		µg/L	20	12/4/2018 8:46:00 PM	R56074
Chloroform	ND	4.7	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Chloromethane	ND	6.4	60		µg/L	20	12/4/2018 8:46:00 PM	R56074
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/4/2018 8:46:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Dibromomethane	ND	6.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
2-Hexanone	ND	18	200		µg/L	20	12/4/2018 8:46:00 PM	R56074
Isopropylbenzene	14	4.4	20	J	µg/L	20	12/4/2018 8:46:00 PM	R56074
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/4/2018 8:46:00 PM	R56074
Methylene Chloride	ND	4.1	60		µg/L	20	12/4/2018 8:46:00 PM	R56074
n-Butylbenzene	ND	5.0	60		µg/L	20	12/4/2018 8:46:00 PM	R56074
n-Propylbenzene	40	4.9	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
sec-Butylbenzene	ND	4.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Styrene	ND	5.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/4/2018 8:46:00 PM	R56074
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/4/2018 8:46:00 PM	R56074
Vinyl chloride	ND	2.4	20		µg/L	20	12/4/2018 8:46:00 PM	R56074
Xylenes, Total	110	13	30		µg/L	20	12/4/2018 8:46:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	20	12/4/2018 8:46:00 PM	R56074
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	20	12/4/2018 8:46:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-57
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:25:00 PM
Lab ID: 1811E76-006
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	20	12/4/2018 8:46:00 PM	R56074
Surr: Toluene-d8	94.1	0	70-130		%Rec	20	12/4/2018 8:46:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	8.2	0.63	1.0		mg/L	1	12/5/2018 7:14:45 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 7:14:45 PM	41893
Surr: DNOP	126	0	76.7-135		%Rec	1	12/5/2018 7:14:45 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	20	0.49	1.0		mg/L	20	12/5/2018 4:37:29 PM	G56109
Surr: BFB	97.9	0	72.8-125		%Rec	20	12/5/2018 4:37:29 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/30/2018 6:02:50 PM	R56016
Chloride	160	10	10		mg/L	20	11/30/2018 6:15:14 PM	R56016
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 6:02:50 PM	R56016
Bromide	2.3	0.10	0.50		mg/L	5	11/30/2018 6:02:50 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 6:02:50 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 6:02:50 PM	R56016
Sulfate	0.92	0.63	2.5	J	mg/L	5	11/30/2018 6:02:50 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.9	0.0049	0.010	*	mg/L	5	12/29/2018 4:14:42 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 4:12:40 PM	C56663
Calcium	120	0.39	5.0		mg/L	5	12/29/2018 4:14:42 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 4:12:40 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 4:12:40 PM	C56663
Iron	3.3	0.082	0.10	*	mg/L	5	12/29/2018 4:14:42 PM	C56663
Magnesium	18	0.25	1.0		mg/L	1	12/29/2018 4:12:40 PM	C56663
Manganese	2.3	0.0020	0.010	*	mg/L	5	12/29/2018 4:14:42 PM	C56663
Potassium	0.91	0.11	1.0	J	mg/L	1	12/29/2018 4:12:40 PM	C56663
Silver	0.0021	0.0018	0.0050	J	mg/L	1	12/29/2018 4:12:40 PM	C56663
Sodium	280	0.82	5.0		mg/L	5	12/29/2018 4:14:42 PM	C56663
Zinc	0.020	0.0021	0.010		mg/L	1	12/29/2018 4:12:40 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.9	0.010	0.020	*	mg/L	10	12/19/2018 11:46:45 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 4:04:32 PM	41848
Chromium	0.0021	0.0018	0.0060	J	mg/L	1	12/13/2018 4:04:32 PM	41848
Copper	0.0044	0.0041	0.0060	J	mg/L	1	12/13/2018 4:04:32 PM	41848
Iron	9.3	0.10	0.20	*	mg/L	10	12/19/2018 11:46:45 A	41848
Manganese	3.2	0.011	0.020	*	mg/L	10	12/19/2018 11:46:45 A	41848
Silver	0.0033	0.0012	0.0050	J	mg/L	1	12/13/2018 4:04:32 PM	41848
Zinc	0.012	0.0033	0.010		mg/L	1	12/21/2018 9:30:59 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0041	0.00042	0.0010		mg/L	1	12/12/2018 4:11:13 PM	B56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 4:11:13 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 4:11:13 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0056	0.00041	0.0010		mg/L	1	12/7/2018 1:19:57 PM	41848
Lead	0.0039	0.00023	0.00050		mg/L	1	12/7/2018 1:19:57 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:19:57 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/13/2018 12:48:14 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzoic acid	54	6.3	20		µg/L	1	12/14/2018 1:12:00 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 1:12:00 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 1:12:00 PM	41855
1-Methylnaphthalene	87	7.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Methylnaphthalene	23	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/14/2018 1:12:00 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 1:12:00 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Naphthalene	89	5.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 1:12:00 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 1:12:00 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Phenol	45	6.0	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 1:12:00 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 1:12:00 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 1:12:00 PM	41855
Surr: 2-Fluorophenol	46.7	0	15-74.1		%Rec	1	12/14/2018 1:12:00 PM	41855
Surr: Phenol-d5	37.1	0	15-59.8		%Rec	1	12/14/2018 1:12:00 PM	41855
Surr: 2,4,6-Tribromophenol	67.9	0	22.1-112		%Rec	1	12/14/2018 1:12:00 PM	41855
Surr: Nitrobenzene-d5	66.1	0	33.2-94		%Rec	1	12/14/2018 1:12:00 PM	41855
Surr: 2-Fluorobiphenyl	58.9	0	34-90.9		%Rec	1	12/14/2018 1:12:00 PM	41855
Surr: 4-Terphenyl-d14	97.2	0	15-149		%Rec	1	12/14/2018 1:12:00 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	11000	35	200		µg/L	200	12/4/2018 9:09:00 PM	R56074
Toluene	61	3.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Ethylbenzene	520	4.5	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Methyl tert-butyl ether (MTBE)	97	9.1	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Naphthalene	120	5.8	40		µg/L	20	12/4/2018 9:32:00 PM	R56074
1-Methylnaphthalene	86	6.7	80		µg/L	20	12/4/2018 9:32:00 PM	R56074
2-Methylnaphthalene	26	6.9	80	J	µg/L	20	12/4/2018 9:32:00 PM	R56074
Acetone	ND	15	200		µg/L	20	12/4/2018 9:32:00 PM	R56074
Bromobenzene	ND	6.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Bromodichloromethane	ND	5.7	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Bromoform	ND	6.5	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Bromomethane	ND	5.5	60		µg/L	20	12/4/2018 9:32:00 PM	R56074
2-Butanone	ND	28	200		µg/L	20	12/4/2018 9:32:00 PM	R56074
Carbon disulfide	ND	7.7	200		µg/L	20	12/4/2018 9:32:00 PM	R56074
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Chlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Chloroethane	ND	3.3	40		µg/L	20	12/4/2018 9:32:00 PM	R56074
Chloroform	ND	4.7	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Chloromethane	ND	6.4	60		µg/L	20	12/4/2018 9:32:00 PM	R56074
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/4/2018 9:32:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Dibromomethane	ND	6.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
2-Hexanone	ND	18	200		µg/L	20	12/4/2018 9:32:00 PM	R56074
Isopropylbenzene	14	4.4	20	J	µg/L	20	12/4/2018 9:32:00 PM	R56074
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/4/2018 9:32:00 PM	R56074
Methylene Chloride	ND	4.1	60		µg/L	20	12/4/2018 9:32:00 PM	R56074
n-Butylbenzene	ND	5.0	60		µg/L	20	12/4/2018 9:32:00 PM	R56074
n-Propylbenzene	38	4.9	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
sec-Butylbenzene	ND	4.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Styrene	ND	5.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/4/2018 9:32:00 PM	R56074
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/4/2018 9:32:00 PM	R56074
Vinyl chloride	ND	2.4	20		µg/L	20	12/4/2018 9:32:00 PM	R56074
Xylenes, Total	110	13	30		µg/L	20	12/4/2018 9:32:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	20	12/4/2018 9:32:00 PM	R56074
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	20	12/4/2018 9:32:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: DUPLICATE
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 2:35:00 PM
Lab ID: 1811E76-007
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	20	12/4/2018 9:32:00 PM	R56074
Surr: Toluene-d8	93.1	0	70-130		%Rec	20	12/4/2018 9:32:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.3	0.63	1.0		mg/L	1	12/5/2018 7:38:47 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 7:38:47 PM	41893
Surr: DNOP	110	0	76.7-135		%Rec	1	12/5/2018 7:38:47 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	69	1.2	2.5		mg/L	50	12/5/2018 5:00:06 PM	G56109
Surr: BFB	99.4	0	72.8-125		%Rec	50	12/5/2018 5:00:06 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/30/2018 6:27:39 PM	R56016
Chloride	160	10	10		mg/L	20	11/30/2018 6:40:04 PM	R56016
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 6:27:39 PM	R56016
Bromide	1.9	0.10	0.50		mg/L	5	11/30/2018 6:27:39 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 6:27:39 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 6:27:39 PM	R56016
Sulfate	ND	0.63	2.5		mg/L	5	11/30/2018 6:27:39 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	4.0	0.0099	0.020	*	mg/L	10	12/29/2018 4:18:59 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 4:16:55 PM	C56663
Calcium	130	0.78	10		mg/L	10	12/29/2018 4:18:59 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 4:16:55 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 4:16:55 PM	C56663
Iron	7.0	0.16	0.20	*	mg/L	10	12/29/2018 4:18:59 PM	C56663
Magnesium	36	0.25	1.0		mg/L	1	12/29/2018 4:16:55 PM	C56663
Manganese	2.0	0.0039	0.020	*	mg/L	10	12/29/2018 4:18:59 PM	C56663
Potassium	1.6	0.11	1.0		mg/L	1	12/29/2018 4:16:55 PM	C56663
Silver	0.0021	0.0018	0.0050	J	mg/L	1	12/29/2018 4:16:55 PM	C56663
Sodium	260	1.6	10		mg/L	10	12/29/2018 4:18:59 PM	C56663
Zinc	0.020	0.0021	0.010		mg/L	1	12/29/2018 4:16:55 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	4.8	0.020	0.040	*	mg/L	20	12/19/2018 11:51:01 A	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 4:06:48 PM	41848
Chromium	ND	0.0018	0.0060		mg/L	1	12/13/2018 4:06:48 PM	41848
Copper	ND	0.0041	0.0060		mg/L	1	12/13/2018 4:06:48 PM	41848
Iron	10	0.20	0.40	*	mg/L	20	12/19/2018 11:51:01 A	41848
Manganese	2.3	0.0055	0.010	*	mg/L	5	12/19/2018 11:48:55 A	41848
Silver	0.0040	0.0012	0.0050	J	mg/L	1	12/13/2018 4:06:48 PM	41848
Zinc	0.0054	0.0033	0.010	J	mg/L	1	12/13/2018 4:06:48 PM	41848
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0030	0.00042	0.0010		mg/L	1	12/12/2018 4:13:38 PM	B56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 4:13:38 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 4:13:38 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0036	0.00041	0.0010		mg/L	1	12/7/2018 1:25:50 PM	41848
Lead	0.0017	0.00023	0.00050		mg/L	1	12/7/2018 1:25:50 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:25:50 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/13/2018 12:50:32 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Acenaphthylene	ND	62	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Aniline	ND	62	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Anthracene	ND	57	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Azobenzene	ND	67	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benz(a)anthracene	ND	53	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzo(a)pyrene	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzo(b)fluoranthene	ND	71	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzo(g,h,i)perylene	ND	57	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzo(k)fluoranthene	ND	64	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzoic acid	170	63	200	JD	µg/L	10	12/14/2018 1:41:12 PM	41855
Benzyl alcohol	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Bis(2-chloroethoxy)methane	ND	61	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Bis(2-chloroethyl)ether	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Bis(2-chloroisopropyl)ether	ND	49	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Bis(2-ethylhexyl)phthalate	ND	81	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Bromophenyl phenyl ether	ND	69	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Butyl benzyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Carbazole	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Chloro-3-methylphenol	ND	56	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Chloroaniline	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Chloronaphthalene	ND	61	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Chlorophenol	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Chlorophenyl phenyl ether	ND	72	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Chrysene	ND	68	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Di-n-butyl phthalate	ND	68	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Di-n-octyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Dibenz(a,h)anthracene	ND	56	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	69	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
1,2-Dichlorobenzene	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
1,3-Dichlorobenzene	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
1,4-Dichlorobenzene	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
3,3´-Dichlorobenzidine	ND	68	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Diethyl phthalate	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Dimethyl phthalate	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4-Dichlorophenol	ND	58	200	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4-Dimethylphenol	ND	59	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4,6-Dinitro-2-methylphenol	ND	54	200	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4-Dinitrophenol	ND	37	200	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4-Dinitrotoluene	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,6-Dinitrotoluene	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Fluoranthene	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Fluorene	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Hexachlorobenzene	ND	62	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Hexachlorobutadiene	ND	64	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Hexachlorocyclopentadiene	ND	39	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Hexachloroethane	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Indeno(1,2,3-cd)pyrene	ND	70	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Isophorone	ND	62	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
1-Methylnaphthalene	ND	70	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Methylnaphthalene	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Methylphenol	ND	63	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
3+4-Methylphenol	ND	54	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
N-Nitrosodi-n-propylamine	ND	61	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
N-Nitrosodimethylamine	ND	69	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
N-Nitrosodiphenylamine	ND	67	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Naphthalene	ND	50	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Nitroaniline	ND	59	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
3-Nitroaniline	ND	68	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Nitroaniline	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Nitrobenzene	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2-Nitrophenol	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
4-Nitrophenol	ND	56	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Pentachlorophenol	ND	53	200	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Phenanthrene	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Phenol	ND	60	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Pyrene	ND	65	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	54	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
1,2,4-Trichlorobenzene	ND	64	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4,5-Trichlorophenol	ND	58	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
2,4,6-Trichlorophenol	ND	64	100	D	µg/L	10	12/14/2018 1:41:12 PM	41855
Surr: 2-Fluorophenol	0	0	15-74.1	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
Surr: Phenol-d5	0	0	15-59.8	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
Surr: Nitrobenzene-d5	0	0	33.2-94	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
Surr: 2-Fluorobiphenyl	0	0	34-90.9	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
Surr: 4-Terphenyl-d14	0	0	15-149	SD	%Rec	10	12/14/2018 1:41:12 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	35000	87	500		µg/L	500	12/4/2018 10:42:00 PM	R56074
Toluene	110	8.4	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Ethylbenzene	1200	11	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Methyl tert-butyl ether (MTBE)	2500	23	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2,4-Trimethylbenzene	15	13	50	J	µg/L	50	12/4/2018 11:05:00 PM	R56074
1,3,5-Trimethylbenzene	ND	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	9.5	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	11	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Naphthalene	160	14	100		µg/L	50	12/4/2018 11:05:00 PM	R56074
1-Methylnaphthalene	60	17	200	J	µg/L	50	12/4/2018 11:05:00 PM	R56074
2-Methylnaphthalene	42	17	200	J	µg/L	50	12/4/2018 11:05:00 PM	R56074
Acetone	ND	38	500		µg/L	50	12/4/2018 11:05:00 PM	R56074
Bromobenzene	ND	16	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Bromodichloromethane	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Bromoform	ND	16	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Bromomethane	ND	14	150		µg/L	50	12/4/2018 11:05:00 PM	R56074
2-Butanone	ND	71	500		µg/L	50	12/4/2018 11:05:00 PM	R56074
Carbon disulfide	ND	19	500		µg/L	50	12/4/2018 11:05:00 PM	R56074
Carbon Tetrachloride	ND	6.9	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Chlorobenzene	ND	15	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Chloroethane	ND	8.2	100		µg/L	50	12/4/2018 11:05:00 PM	R56074
Chloroform	ND	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Chloromethane	ND	16	150		µg/L	50	12/4/2018 11:05:00 PM	R56074
2-Chlorotoluene	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
4-Chlorotoluene	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
cis-1,2-DCE	ND	19	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
cis-1,3-Dichloropropene	ND	15	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	24	100		µg/L	50	12/4/2018 11:05:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Dibromomethane	ND	16	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2-Dichlorobenzene	ND	16	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,3-Dichlorobenzene	ND	16	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,4-Dichlorobenzene	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Dichlorodifluoromethane	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1-Dichloroethane	ND	8.8	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1-Dichloroethene	ND	6.0	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2-Dichloropropane	ND	8.3	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,3-Dichloropropane	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
2,2-Dichloropropane	ND	12	100		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1-Dichloropropene	ND	8.1	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Hexachlorobutadiene	ND	20	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
2-Hexanone	ND	45	500		µg/L	50	12/4/2018 11:05:00 PM	R56074
Isopropylbenzene	30	11	50	J	µg/L	50	12/4/2018 11:05:00 PM	R56074
4-Isopropyltoluene	ND	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
4-Methyl-2-pentanone	ND	23	500		µg/L	50	12/4/2018 11:05:00 PM	R56074
Methylene Chloride	ND	10	150		µg/L	50	12/4/2018 11:05:00 PM	R56074
n-Butylbenzene	ND	12	150		µg/L	50	12/4/2018 11:05:00 PM	R56074
n-Propylbenzene	97	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
sec-Butylbenzene	ND	10	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Styrene	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
tert-Butylbenzene	ND	11	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	16	100		µg/L	50	12/4/2018 11:05:00 PM	R56074
Tetrachloroethene (PCE)	ND	7.6	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
trans-1,2-DCE	ND	9.1	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
trans-1,3-Dichloropropene	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2,3-Trichlorobenzene	ND	14	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2,4-Trichlorobenzene	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1,1-Trichloroethane	ND	8.2	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,1,2-Trichloroethane	ND	12	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Trichloroethene (TCE)	ND	13	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Trichlorofluoromethane	ND	7.2	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
1,2,3-Trichloropropane	ND	28	100		µg/L	50	12/4/2018 11:05:00 PM	R56074
Vinyl chloride	ND	6.1	50		µg/L	50	12/4/2018 11:05:00 PM	R56074
Xylenes, Total	190	32	75		µg/L	50	12/4/2018 11:05:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	99.9	0	70-130		%Rec	50	12/4/2018 11:05:00 PM	R56074
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	50	12/4/2018 11:05:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-58
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:15:00 PM
Lab ID: 1811E76-008
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	50	12/4/2018 11:05:00 PM	R56074
Surr: Toluene-d8	91.7	0	70-130		%Rec	50	12/4/2018 11:05:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	12/5/2018 8:02:52 PM	41893
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/5/2018 8:02:52 PM	41893
Surr: DNOP	114	0	76.7-135		%Rec	1	12/5/2018 8:02:52 PM	41893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.7	0.12	0.25		mg/L	5	12/5/2018 5:22:49 PM	G56109
Surr: BFB	89.2	0	72.8-125		%Rec	5	12/5/2018 5:22:49 PM	G56109
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/30/2018 6:52:28 PM	R56016
Chloride	80	2.5	2.5		mg/L	5	11/30/2018 6:52:28 PM	R56016
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/30/2018 6:52:28 PM	R56016
Bromide	0.54	0.10	0.50		mg/L	5	11/30/2018 6:52:28 PM	R56016
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/30/2018 6:52:28 PM	R56016
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/30/2018 6:52:28 PM	R56016
Sulfate	79	0.63	2.5		mg/L	5	11/30/2018 6:52:28 PM	R56016
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.080	0.00099	0.0020		mg/L	1	12/29/2018 4:21:12 PM	C56663
Cadmium	ND	0.0010	0.0020		mg/L	1	12/29/2018 4:21:12 PM	C56663
Calcium	30	0.078	1.0		mg/L	1	12/29/2018 4:21:12 PM	C56663
Chromium	ND	0.0013	0.0060		mg/L	1	12/29/2018 4:21:12 PM	C56663
Copper	ND	0.0032	0.0060		mg/L	1	12/29/2018 4:21:12 PM	C56663
Iron	0.35	0.016	0.020	*	mg/L	1	12/29/2018 4:21:12 PM	C56663
Magnesium	4.6	0.25	1.0		mg/L	1	12/29/2018 4:21:12 PM	C56663
Manganese	0.33	0.00039	0.0020	*	mg/L	1	12/29/2018 4:21:12 PM	C56663
Potassium	2.4	0.11	1.0		mg/L	1	12/29/2018 4:21:12 PM	C56663
Silver	ND	0.0018	0.0050		mg/L	1	12/29/2018 4:21:12 PM	C56663
Sodium	270	0.82	5.0		mg/L	5	12/29/2018 4:23:26 PM	C56663
Zinc	0.018	0.0021	0.010		mg/L	1	12/29/2018 4:21:12 PM	C56663
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.21	0.0010	0.0020		mg/L	1	12/13/2018 4:08:58 PM	41848
Cadmium	ND	0.00058	0.0020		mg/L	1	12/13/2018 4:08:58 PM	41848
Chromium	0.0079	0.0018	0.0060		mg/L	1	12/13/2018 4:08:58 PM	41848
Copper	0.0086	0.0041	0.0060		mg/L	1	12/13/2018 4:08:58 PM	41848
Iron	4.6	0.051	0.10	*	mg/L	5	12/19/2018 11:53:23 A	42160
Manganese	0.45	0.0011	0.0020	*	mg/L	1	12/13/2018 4:08:58 PM	41848
Silver	ND	0.0012	0.0050		mg/L	1	12/13/2018 4:08:58 PM	41848
Zinc	0.024	0.0033	0.010		mg/L	1	12/21/2018 9:32:53 AM	42160
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0063	0.00042	0.0010		mg/L	1	12/12/2018 4:16:03 PM	B56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 4:16:03 PM	B56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 4:16:03 PM	B56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0070	0.00041	0.0010		mg/L	1	12/7/2018 1:27:46 PM	41848
Lead	0.0032	0.00023	0.00050		mg/L	1	12/7/2018 1:27:46 PM	41848
Selenium	ND	0.00098	0.0010		mg/L	1	12/7/2018 1:27:46 PM	41848
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/13/2018 12:57:27 P	42074
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Acenaphthylene	ND	6.2	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Aniline	ND	6.2	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Anthracene	ND	5.7	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Azobenzene	ND	6.7	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Benzoic acid	17	6.3	20	J	µg/L	1	12/14/2018 2:10:25 PM	41855
Benzyl alcohol	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Carbazole	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Chloroaniline	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Chlorophenol	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Chrysene	ND	6.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/14/2018 2:10:25 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	6.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Diethyl phthalate	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Fluoranthene	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Fluorene	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Hexachloroethane	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Isophorone	ND	6.2	10		µg/L	1	12/14/2018 2:10:25 PM	41855
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Methylphenol	ND	6.3	10		µg/L	1	12/14/2018 2:10:25 PM	41855
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/14/2018 2:10:25 PM	41855
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Naphthalene	ND	5.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Nitroaniline	ND	5.9	10		µg/L	1	12/14/2018 2:10:25 PM	41855
3-Nitroaniline	ND	6.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Nitroaniline	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Nitrobenzene	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2-Nitrophenol	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
4-Nitrophenol	ND	5.6	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Pentachlorophenol	ND	5.3	20		µg/L	1	12/14/2018 2:10:25 PM	41855
Phenanthrene	ND	6.0	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Phenol	6.4	6.0	10	J	µg/L	1	12/14/2018 2:10:25 PM	41855
Pyrene	ND	6.5	10		µg/L	1	12/14/2018 2:10:25 PM	41855

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	5.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/14/2018 2:10:25 PM	41855
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/14/2018 2:10:25 PM	41855
Surr: 2-Fluorophenol	33.4	0	15-74.1		%Rec	1	12/14/2018 2:10:25 PM	41855
Surr: Phenol-d5	25.4	0	15-59.8		%Rec	1	12/14/2018 2:10:25 PM	41855
Surr: 2,4,6-Tribromophenol	72.5	0	22.1-112		%Rec	1	12/14/2018 2:10:25 PM	41855
Surr: Nitrobenzene-d5	43.5	0	33.2-94		%Rec	1	12/14/2018 2:10:25 PM	41855
Surr: 2-Fluorobiphenyl	36.3	0	34-90.9		%Rec	1	12/14/2018 2:10:25 PM	41855
Surr: 4-Terphenyl-d14	57.4	0	15-149		%Rec	1	12/14/2018 2:10:25 PM	41855
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	920	8.7	50		µg/L	50	12/4/2018 9:56:00 PM	R56074
Toluene	13	0.84	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Ethylbenzene	1.9	1.1	5.0	J	µg/L	5	12/4/2018 10:19:00 PM	R56074
Methyl tert-butyl ether (MTBE)	ND	2.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2-Dichloroethane (EDC)	ND	0.95	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Naphthalene	ND	1.4	10		µg/L	5	12/4/2018 10:19:00 PM	R56074
1-Methylnaphthalene	ND	1.7	20		µg/L	5	12/4/2018 10:19:00 PM	R56074
2-Methylnaphthalene	ND	1.7	20		µg/L	5	12/4/2018 10:19:00 PM	R56074
Acetone	ND	3.8	50		µg/L	5	12/4/2018 10:19:00 PM	R56074
Bromobenzene	ND	1.6	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Bromodichloromethane	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Bromoform	ND	1.6	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Bromomethane	ND	1.4	15		µg/L	5	12/4/2018 10:19:00 PM	R56074
2-Butanone	ND	7.1	50		µg/L	5	12/4/2018 10:19:00 PM	R56074
Carbon disulfide	ND	1.9	50		µg/L	5	12/4/2018 10:19:00 PM	R56074
Carbon Tetrachloride	ND	0.69	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Chlorobenzene	ND	1.5	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Chloroethane	ND	0.82	10		µg/L	5	12/4/2018 10:19:00 PM	R56074
Chloroform	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Chloromethane	ND	1.6	15		µg/L	5	12/4/2018 10:19:00 PM	R56074
2-Chlorotoluene	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
4-Chlorotoluene	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	12/4/2018 10:19:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Dibromomethane	ND	1.6	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,4-Dichlorobenzene	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1-Dichloroethane	ND	0.88	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2-Dichloropropane	ND	0.83	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
2,2-Dichloropropane	ND	1.2	10		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Hexachlorobutadiene	ND	2.0	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
2-Hexanone	ND	4.5	50		µg/L	5	12/4/2018 10:19:00 PM	R56074
Isopropylbenzene	ND	1.1	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	12/4/2018 10:19:00 PM	R56074
Methylene Chloride	ND	1.0	15		µg/L	5	12/4/2018 10:19:00 PM	R56074
n-Butylbenzene	ND	1.2	15		µg/L	5	12/4/2018 10:19:00 PM	R56074
n-Propylbenzene	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Styrene	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	12/4/2018 10:19:00 PM	R56074
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
trans-1,2-DCE	ND	0.91	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1,1-Trichloroethane	ND	0.82	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Trichlorofluoromethane	ND	0.72	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	12/4/2018 10:19:00 PM	R56074
Vinyl chloride	ND	0.61	5.0		µg/L	5	12/4/2018 10:19:00 PM	R56074
Xylenes, Total	9.0	3.2	7.5		µg/L	5	12/4/2018 10:19:00 PM	R56074
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	5	12/4/2018 10:19:00 PM	R56074
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	5	12/4/2018 10:19:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-62
Project: 2018 4th Qtr GW Sampling
Collection Date: 11/29/2018 12:45:00 PM
Lab ID: 1811E76-009
Matrix: AQUEOUS
Received Date: 11/30/2018 7:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	99.9	0	70-130		%Rec	5	12/4/2018 10:19:00 PM	R56074
Surr: Toluene-d8	94.0	0	70-130		%Rec	5	12/4/2018 10:19:00 PM	R56074

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895977** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Chromium	0.49	0.0060	0.5000	0	97.0	85	115			
Copper	0.49	0.0060	0.5000	0	98.5	85	115			
Iron	0.50	0.020	0.5000	0	99.5	85	115			
Magnesium	49	1.0	50.00	0	99.0	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			
Potassium	49	1.0	50.00	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	51	1.0	50.00	0	102	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56663**	RunNo: **56663**
Prep Date:	Analysis Date: **12/29/2018**	SeqNo: **1895978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	96.9	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	105	50	150			
Calcium	0.51	1.0	0.5000	0	103	50	150			J
Chromium	0.0057	0.0060	0.006000	0	95.4	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**C56663**	RunNo:	**56663**
Prep Date:		Analysis Date:	**12/29/2018**	SeqNo:	**1895978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0055	0.0060	0.006000	0	91.6	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.54	1.0	0.5000	0	109	50	150			J
Silver	0.0046	0.0050	0.005000	0	92.7	50	150			J
Sodium	0.49	1.0	0.5000	0	97.5	50	150			J
Zinc	0.0058	0.010	0.005000	0	115	50	150			J

Sample ID	**1811E76-003GMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**MKTF-16**	Batch ID:	**C56663**	RunNo:	**56663**
Prep Date:		Analysis Date:	**12/29/2018**	SeqNo:	**1896102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.4	70	130			
Chromium	0.47	0.0060	0.5000	0	93.3	70	130			
Copper	0.50	0.0060	0.5000	0	101	70	130			
Magnesium	67	1.0	50.00	18.71	95.7	70	130			
Potassium	49	1.0	50.00	1.212	95.2	70	130			
Silver	0.093	0.0050	0.1000	0	92.8	70	130			
Zinc	0.50	0.010	0.5000	0.03094	94.5	70	130			

Sample ID	**1811E76-003GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**MKTF-16**	Batch ID:	**C56663**	RunNo:	**56663**
Prep Date:		Analysis Date:	**12/29/2018**	SeqNo:	**1896103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	101	70	130	1.35	20	
Chromium	0.47	0.0060	0.5000	0	94.1	70	130	0.838	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	1.78	20	
Magnesium	68	1.0	50.00	18.71	98.5	70	130	2.09	20	
Potassium	50	1.0	50.00	1.212	97.6	70	130	2.48	20	
Silver	0.095	0.0050	0.1000	0	94.6	70	130	1.93	20	
Zinc	0.51	0.010	0.5000	0.03094	95.6	70	130	1.05	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**LCS-41848**	SampType: **LCS**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID: **41848**			RunNo: **56327**					
Prep Date:	**12/3/2018**	Analysis Date: **12/13/2018**			SeqNo: **1882631**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0	99.5	85	115			

Sample ID	**LLLCS-41848**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **41848**			RunNo: **56327**					
Prep Date:	**12/3/2018**	Analysis Date: **12/13/2018**			SeqNo: **1882632**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0079	0.010	0.005000	0	158	50	150			JS

Sample ID	**MB-41848**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **41848**			RunNo: **56327**					
Prep Date:	**12/3/2018**	Analysis Date: **12/13/2018**			SeqNo: **1882660**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID	**LLLCS-41848**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **41848**			RunNo: **56327**					
Prep Date:	**12/3/2018**	Analysis Date: **12/13/2018**			SeqNo: **1882758**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0079	0.010	0.005000	0	159	50	150			JS

Sample ID	**MB-42160**	SampType: **MBLK**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890805**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Zinc	ND	0.010								

Sample ID	**LLLCS-42160**	SampType: **LCSLL**			TestCode: **EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID: **42160**			RunNo: **56532**					
Prep Date:	**12/17/2018**	Analysis Date: **12/21/2018**			SeqNo: **1890807**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.018	0.020	0.02000	0	89.8	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**LCS-42160**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**42160**		RunNo:	**56532**				
Prep Date:	**12/17/2018**	Analysis Date:	**12/21/2018**		SeqNo:	**1890809**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	99.0	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	**LLLCS-42160**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**42160**		RunNo:	**56532**				
Prep Date:	**12/17/2018**	Analysis Date:	**12/21/2018**		SeqNo:	**1890811**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0075	0.010	0.005000	0	151	50	150			JS

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	96.5	50	150			J
Lead	0.00048	0.00050	0.0005000	0	96.6	50	150			J
Selenium	0.0010	0.0010	0.001000	0	102	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.012	0.00050	0.01250	0	98.7	85	115			
Selenium	0.025	0.0010	0.02500	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41848**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41848**	RunNo:	**56166**					
Prep Date:	**12/3/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876164**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41848**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41848**	RunNo:	**56166**					
Prep Date:	**12/3/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876167**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00053	0.00050	0.0005000	0	106	50	150			
Selenium	0.0010	0.0010	0.001000	0	99.7	50	150			J

Sample ID	**MSLCS-41848**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41848**	RunNo:	**56166**					
Prep Date:	**12/3/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1876168**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.4	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	97.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-42074**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**42074**	RunNo:	**56313**					
Prep Date:	**12/12/2018**	Analysis Date:	**12/13/2018**	SeqNo:	**1882029**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-42074**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**42074**	RunNo:	**56313**					
Prep Date:	**12/12/2018**	Analysis Date:	**12/13/2018**	SeqNo:	**1882032**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0045	0.00020	0.005000	0	90.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R56016**	RunNo: **56016**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.14	0.50								J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R56016**	RunNo: **56016**
Prep Date:	Analysis Date: **11/30/2018**	SeqNo: **1869722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.8	0.50	5.000	0	95.6	90	110			
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.6	90	110			
Bromide	2.4	0.10	2.500	0	96.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.9	0.50	10.00	0	99.0	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R56075**	RunNo: **56075**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R56075**	RunNo: **56075**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872651** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**LCS-41893**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**41893**		RunNo:	**56089**					
Prep Date:	**12/4/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874398**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		5.1	1.0	5.000	0	101	70	130			
Surr: DNOP		0.56		0.5000		112	76.7	135			

Sample ID	**MB-41893**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**41893**		RunNo:	**56089**					
Prep Date:	**12/4/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874400**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	1.0								
Motor Oil Range Organics (MRO)		ND	5.0								
Surr: DNOP		1.1		1.000		106	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID	**RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**G56109**	RunNo:	**56109**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874298**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		92.1	72.8	125			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**G56109**	RunNo:	**56109**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874299**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.7	77.7	130			
Surr: BFB	22		20.00		110	72.8	125			

Sample ID	**1811E76-003AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**MKTF-16**	Batch ID:	**G56109**	RunNo:	**56109**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874306**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	58	2.5	25.00	34.35	93.1	65.4	140			
Surr: BFB	1100		1000		109	72.8	125			

Sample ID	**1811E76-003AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**MKTF-16**	Batch ID:	**G56109**	RunNo:	**56109**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874307**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	58	2.5	25.00	34.35	94.0	65.4	140	0.398	20	
Surr: BFB	1100		1000		110	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872599** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	95.0	70	130			
Chlorobenzene	20	1.0	20.00	0	97.7	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872600** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872600** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**

09-Jan-19

Client: Marathon

Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872600** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.4	70	130			
Surr: Toluene-d8	9.2		10.00		92.3	70	130			

Sample ID **1811e76-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-16**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872613** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20000	100	2000	18800	49.8	70	130			ES
Toluene	2100	100	2000	124.8	98.1	70	130			
Chlorobenzene	1900	100	2000	0	94.5	70	130			
1,1-Dichloroethene	2100	100	2000	0	106	67.6	130			
Trichloroethene (TCE)	1900	100	2000	0	94.5	70	130			
Surr: 1,2-Dichloroethane-d4	1100		1000		106	70	130			
Surr: 4-Bromofluorobenzene	1000		1000		103	70	130			
Surr: Dibromofluoromethane	970		1000		96.6	70	130			
Surr: Toluene-d8	880		1000		87.5	70	130			

Sample ID **1811e76-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-16**	Batch ID: **R56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19000	100	2000	18800	-8.56	70	130	6.07	20	ES
Toluene	2000	100	2000	124.8	92.3	70	130	5.75	20	
Chlorobenzene	1800	100	2000	0	91.2	70	130	3.61	20	
1,1-Dichloroethene	1900	100	2000	0	93.3	67.6	130	12.3	20	
Trichloroethene (TCE)	1900	100	2000	0	95.2	70	130	0.780	20	
Surr: 1,2-Dichloroethane-d4	1100		1000		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	1100		1000		106	70	130	0	0	
Surr: Dibromofluoromethane	990		1000		98.5	70	130	0	0	
Surr: Toluene-d8	940		1000		94.5	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **LCSW**	Batch ID: **A56074**	RunNo: **56074**						
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1872628**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	19	1.0	20.00	0	94.8	70	130			
Chlorobenzene	19	1.0	20.00	0	93.3	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.1		10.00		91.5	70	130			

Sample ID **rb4**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**	Batch ID: **A56074**	RunNo: **56074**						
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1872629**	Units: **µg/L**					

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **rb4**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1872629** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **rb4**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A56074**	RunNo: **56074**
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1872629** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **lcs-41855**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880823** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.2	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	57	115			
2-Chlorophenol	140	10	200.0	0	68.6	43.4	112			
1,4-Dichlorobenzene	59	10	100.0	0	58.6	38	95.2			
2,4-Dinitrotoluene	76	10	100.0	0	75.5	55.1	96.7			
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.8	55	112			
4-Nitrophenol	140	10	200.0	0	68.4	16.6	93			
Pentachlorophenol	150	20	200.0	0	75.0	43.2	104			
Phenol	110	10	200.0	0	56.0	21.3	85.7			
Pyrene	85	10	100.0	0	85.2	64.9	105			
1,2,4-Trichlorobenzene	62	10	100.0	0	62.4	42.6	107			
Surr: 2-Fluorophenol	130		200.0		62.7	15	74.1			
Surr: Phenol-d5	110		200.0		57.3	15	59.8			
Surr: 2,4,6-Tribromophenol	170		200.0		86.6	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		67.4	33.2	94			
Surr: 2-Fluorobiphenyl	63		100.0		63.5	34	90.9			
Surr: 4-Terphenyl-d14	120		100.0		117	15	149			

Sample ID **mb-41855**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880824** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	16	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41855**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880824** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811E76**
09-Jan-19

Client: Marathon
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41855**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41855**	RunNo: **56284**
Prep Date: **12/3/2018**	Analysis Date: **12/12/2018**	SeqNo: **1880824** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		71.0	15	74.1			
Surr: Phenol-d5	120		200.0		59.8	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		73.9	22.1	112			
Surr: Nitrobenzene-d5	75		100.0		75.4	33.2	94			
Surr: 2-Fluorobiphenyl	68		100.0		67.9	34	90.9			
Surr: 4-Terphenyl-d14	110		100.0		114	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811E76** RcptNo: 1

Received By: **Isaiah Ortiz** **11/30/2018 7:55:00 AM** I Ortiz

Completed By: **Jazzmine Burkhead** **11/30/2018 9:04:16 AM** Jazzmine Burkhead

Reviewed By: AT 11/30/18

Labeled by: DAD 11/30/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2
(<2 or >12 unless noted)
Adjusted? NO
Checked by: DAD 11/30/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Yes			
2	0.5	Good	Yes			
3	2.0	Good	Yes			

Chain-of-Custody Record

Client:	Marathon Petroleum
	GALLUP REFINERY
Mailing Address:	92 GIANT CROSSING ROAD, GALLUP, NM 87301
Phone #:	505-722-3833
Email or Fax#:	505-863-0930
QA/QC Package:	☐ Standard X Level 4 (Full Validation)
Accreditation:	☐ NELAP ☐ Other_____
☐ EDD (Type)	_____

Turn-Around Time:	X Standard ☐ Rush_____
Project Name:	2018 4th Qtr GW Sampling
	MKTF & OWWells
Project Manager:	C JOHNSON
	(CAJohnson1@Marathonpetroleum.com)
Sampler:	C. JOHNSON
On Ice:	~~X~~ Yes ☐ No
Sample Temperature:	0.3, 0.5, 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811E76	Analysis Request: 8260+MTBE	8015D EXTENDED(DRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011/504.1 FOR EDB	CYANIDE	Air Bubbles (Y or N)
11/29/2018	700	AQUEOUS	Field Blank	3-40ml VOAs	HCL	-001	X								
11/29/2018	700	AQUEOUS	Trip Blank	3-40ml VOAs	HCL	-002	X								
11/29/2018	1400	AQUEOUS	MKTF-16	MISC	MISC	-003	X	X	X	X	X	X			
11/29/2018	1345	AQUEOUS	MKTF-20	MISC	MISC	-004	X	X	X	X	X	X			
11/29/2018	1320	AQUEOUS	MKTF-21	MISC	MISC	-005	X	X	X	X	X	X			
11/29/2018	1425	AQUEOUS	OW-57	MISC	MISC	-006	X	X	X	X	X	X			
11/29/2018	1435	AQUEOUS	DUPLICATE	MISC	MISC	-007	X	X	X	X	X	X			
11/29/2018	1215	AQUEOUS	OW-58	MISC	MISC	-008	X	X	X	X	X	X			
11/29/2018	1245	AQUEOUS	OW-62	MISC	MISC	-009	X	X	X	X	X	X			
~~11/29/2018~~	~~1200~~	~~AQUEOUS~~	~~OW-63~~	~~MISC~~	~~MISC~~	-010	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~			
			~~A~~ 12/04/18					no GRO ~~A~~ 12/04/18							

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/29/18	1700			11/29/18	17:01
Date:	Time:	Relinquished by:	Received by:	Date	Time
11/30/18	0735		Client	11/30/18	0735

Remarks: WQCC METALS TO INCLUDE RCRA 8 METALS MINUS URANIUM, INCLUDES MERCURY OW-63 cancelled ~~A~~ 12/04/18 Resampled 12/12/30 ~~A~~ 12/04/18

No VOA's for OW-63 CJ will resample for OW-63 VOA's ~~A~~ 12/03/18

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 26, 2018

Cheryl Johnson

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2018 4th Quarter OW Wells OrderNo.: 1811442

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/8/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1811442**
Date Reported: **12/26/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811442-001
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Toluene	0.21	0.17	1.0	J	µg/L	1	11/9/2018 12:31:32 PM	R55556
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Naphthalene	1.0	0.29	2.0	J	µg/L	1	11/9/2018 12:31:32 PM	R55556
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Acetone	2.1	0.76	10	J	µg/L	1	11/9/2018 12:31:32 PM	R55556
Bromobenzene	ND	0.32	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Bromoform	ND	0.32	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Bromomethane	ND	0.27	3.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
2-Butanone	ND	1.4	10		µg/L	1	11/9/2018 12:31:32 PM	R55556
Carbon disulfide	ND	0.39	10		µg/L	1	11/9/2018 12:31:32 PM	R55556
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Chloroethane	ND	0.16	2.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Chloroform	ND	0.24	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Chloromethane	ND	0.32	3.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Dibromomethane	ND	0.32	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/9/2018 12:31:32 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811442-001
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
2-Hexanone	ND	0.91	10		µg/L	1	11/9/2018 12:31:32 PM	R55556
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/9/2018 12:31:32 PM	R55556
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Styrene	ND	0.25	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/9/2018 12:31:32 PM	R55556
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/9/2018 12:31:32 PM	R55556
Surr: 1,2-Dichloroethane-d4	94.7	0	70-130		%Rec	1	11/9/2018 12:31:32 PM	R55556
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	11/9/2018 12:31:32 PM	R55556
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	11/9/2018 12:31:32 PM	R55556
Surr: Toluene-d8	108	0	70-130		%Rec	1	11/9/2018 12:31:32 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 2018 4th Quarter OW Wells
Collection Date:
Lab ID: 1811442-002
Matrix: TRIP BLANK
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Toluene	ND	0.17	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Naphthalene	ND	0.29	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Acetone	1.6	0.76	10	J	µg/L	1	11/9/2018 1:57:17 PM	R55556
Bromobenzene	ND	0.32	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Bromoform	ND	0.32	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Bromomethane	ND	0.27	3.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
2-Butanone	ND	1.4	10		µg/L	1	11/9/2018 1:57:17 PM	R55556
Carbon disulfide	ND	0.39	10		µg/L	1	11/9/2018 1:57:17 PM	R55556
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Chloroethane	ND	0.16	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Chloroform	ND	0.24	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Chloromethane	ND	0.32	3.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Dibromomethane	ND	0.32	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 2018 4th Quarter OW Wells
Collection Date:
Lab ID: 1811442-002
Matrix: TRIP BLANK
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
2-Hexanone	ND	0.91	10		µg/L	1	11/9/2018 1:57:17 PM	R55556
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/9/2018 1:57:17 PM	R55556
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Styrene	ND	0.25	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/9/2018 1:57:17 PM	R55556
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/9/2018 1:57:17 PM	R55556
Surr: 1,2-Dichloroethane-d4	93.3	0	70-130		%Rec	1	11/9/2018 1:57:17 PM	R55556
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	11/9/2018 1:57:17 PM	R55556
Surr: Dibromofluoromethane	95.1	0	70-130		%Rec	1	11/9/2018 1:57:17 PM	R55556
Surr: Toluene-d8	105	0	70-130		%Rec	1	11/9/2018 1:57:17 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 9:25:57 AM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 9:25:57 AM	41474
Surr: DNOP	110	0	76.7-135		%Rec	1	11/13/2018 9:25:57 AM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/9/2018 10:25:29 AM	G55538
Surr: BFB	102	0	72.8-125		%Rec	1	11/9/2018 10:25:29 AM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/20/2018 1:09:58 PM	R55800
Chloride	1500	100	100		mg/L	200	11/20/2018 1:22:51 PM	R55800
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/8/2018 11:51:09 PM	R55509
Bromide	4.7	0.10	0.50		mg/L	5	11/8/2018 11:51:09 PM	R55509
Nitrogen, Nitrate (As N)	20	0.066	0.50	*	mg/L	5	11/8/2018 11:51:09 PM	R55509
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/8/2018 11:51:09 PM	R55509
Sulfate	740	2.5	10		mg/L	20	11/9/2018 12:03:34 AM	R55509
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.030	0.00099	0.0020		mg/L	1	12/8/2018 8:21:44 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:21:44 PM	C56205
Calcium	110	0.39	5.0		mg/L	5	12/17/2018 9:04:22 AM	A56396
Chromium	0.0047	0.0013	0.0060	J	mg/L	1	12/8/2018 8:21:44 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:21:44 PM	C56205
Iron	0.042	0.016	0.020		mg/L	1	12/8/2018 8:21:44 PM	C56205
Magnesium	16	0.25	1.0		mg/L	1	12/8/2018 8:21:44 PM	C56205
Manganese	0.022	0.00039	0.0020		mg/L	1	12/8/2018 8:21:44 PM	C56205
Potassium	3.8	0.11	1.0		mg/L	1	12/8/2018 8:21:44 PM	C56205
Silver	0.0028	0.0018	0.0050	J	mg/L	1	12/8/2018 8:21:44 PM	C56205
Sodium	1400	8.2	50		mg/L	50	12/17/2018 9:06:29 AM	A56396
Zinc	0.029	0.0021	0.010		mg/L	1	12/8/2018 8:21:44 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.20	0.0010	0.0020		mg/L	1	11/26/2018 4:48:23 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 4:48:23 PM	41612
Chromium	0.014	0.0018	0.0060		mg/L	1	11/26/2018 4:48:23 PM	41612
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 4:48:23 PM	41612
Iron	5.0	0.10	0.20	*	mg/L	10	11/27/2018 10:49:41 P	41612
Manganese	0.22	0.0011	0.0020	*	mg/L	1	11/26/2018 4:48:23 PM	41612
Silver	0.0036	0.0012	0.0050	J	mg/L	1	11/26/2018 4:48:23 PM	41612
Zinc	0.018	0.0033	0.010		mg/L	1	12/5/2018 4:11:14 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0018	0.00042	0.0010		mg/L	1	11/28/2018 2:04:04 PM	B55939
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2018 2:04:04 PM	B55939
Selenium	0.016	0.00076	0.0010		mg/L	1	11/28/2018 2:04:04 PM	B55939
Uranium	0.056	0.00048	0.0025	*	mg/L	5	11/30/2018 2:34:08 PM	B55992
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0039	0.0021	0.0050	J	mg/L	5	11/26/2018 6:02:50 PM	41612
Lead	0.0038	0.00023	0.00050		mg/L	1	11/20/2018 4:07:46 PM	41612
Selenium	0.018	0.0049	0.0050		mg/L	5	11/26/2018 6:02:50 PM	41612
Uranium	0.054	0.00034	0.0025	*	mg/L	5	11/27/2018 4:39:40 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	11/28/2018 3:59:17 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzoic acid	ND	6.3	20		µg/L	1	11/19/2018 4:42:33 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 4:42:33 PM	41498
1-Methylnaphthalene	ND	7.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 4:42:33 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 4:42:33 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Naphthalene	ND	5.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 4:42:33 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 4:42:33 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 4:42:33 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 4:42:33 PM	41498
Surr: 2-Fluorophenol	46.5	0	15-74.1		%Rec	1	11/19/2018 4:42:33 PM	41498
Surr: Phenol-d5	35.7	0	15-59.8		%Rec	1	11/19/2018 4:42:33 PM	41498
Surr: 2,4,6-Tribromophenol	83.2	0	22.1-112		%Rec	1	11/19/2018 4:42:33 PM	41498
Surr: Nitrobenzene-d5	74.0	0	33.2-94		%Rec	1	11/19/2018 4:42:33 PM	41498
Surr: 2-Fluorobiphenyl	66.6	0	34-90.9		%Rec	1	11/19/2018 4:42:33 PM	41498
Surr: 4-Terphenyl-d14	71.4	0	15-149		%Rec	1	11/19/2018 4:42:33 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Toluene	ND	0.17	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Methyl tert-butyl ether (MTBE)	0.71	0.46	1.0	J	µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Naphthalene	ND	0.29	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Acetone	2.1	0.76	10	J	µg/L	1	11/9/2018 2:25:58 PM	R55556
Bromobenzene	ND	0.32	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Bromoform	ND	0.32	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Bromomethane	ND	0.27	3.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
2-Butanone	ND	1.4	10		µg/L	1	11/9/2018 2:25:58 PM	R55556
Carbon disulfide	ND	0.39	10		µg/L	1	11/9/2018 2:25:58 PM	R55556
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Chloroethane	ND	0.16	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Chloroform	ND	0.24	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Chloromethane	ND	0.32	3.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Dibromomethane	ND	0.32	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
2-Hexanone	ND	0.91	10		µg/L	1	11/9/2018 2:25:58 PM	R55556
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/9/2018 2:25:58 PM	R55556
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Styrene	ND	0.25	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/9/2018 2:25:58 PM	R55556
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/9/2018 2:25:58 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-60
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 10:10:00 AM
Lab ID: 1811442-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	94.8	0	70-130		%Rec	1	11/9/2018 2:25:58 PM	R55556
Surr: 4-Bromofluorobenzene	110	0	70-130		%Rec	1	11/9/2018 2:25:58 PM	R55556
Surr: Dibromofluoromethane	98.8	0	70-130		%Rec	1	11/9/2018 2:25:58 PM	R55556
Surr: Toluene-d8	107	0	70-130		%Rec	1	11/9/2018 2:25:58 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 9:48:13 AM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 9:48:13 AM	41474
Surr: DNOP	113	0	76.7-135		%Rec	1	11/13/2018 9:48:13 AM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.23	0.024	0.050		mg/L	1	11/9/2018 10:48:15 AM	G55538
Surr: BFB	5730	0	72.8-125	S	%Rec	1	11/9/2018 10:48:15 AM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 12:15:58 AM	R55509
Chloride	2100	100	100		mg/L	200	11/20/2018 1:35:42 PM	R55800
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/9/2018 12:28:22 AM	R55509
Bromide	3.0	0.10	0.50		mg/L	5	11/9/2018 12:15:58 AM	R55509
Nitrogen, Nitrate (As N)	ND	0.066	0.50		mg/L	5	11/9/2018 12:15:58 AM	R55509
Phosphorus, Orthophosphate (As P)	ND	10	10		mg/L	20	11/9/2018 12:28:22 AM	R55509
Sulfate	2700	25	100		mg/L	200	11/20/2018 1:35:42 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.011	0.00099	0.0020		mg/L	1	12/8/2018 8:24:04 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:24:04 PM	C56205
Calcium	210	0.78	10		mg/L	10	12/17/2018 9:08:29 AM	A56396
Chromium	ND	0.0013	0.0060		mg/L	1	12/8/2018 8:24:04 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:24:04 PM	C56205
Iron	0.020	0.016	0.020	J	mg/L	1	12/8/2018 8:24:04 PM	C56205
Magnesium	62	0.25	1.0		mg/L	1	12/8/2018 8:24:04 PM	C56205
Manganese	0.038	0.00039	0.0020		mg/L	1	12/8/2018 8:24:04 PM	C56205
Potassium	0.95	0.11	1.0	J	mg/L	1	12/8/2018 8:24:04 PM	C56205
Silver	0.0051	0.0018	0.0050		mg/L	1	12/8/2018 8:24:04 PM	C56205
Sodium	2400	16	100		mg/L	100	12/17/2018 9:10:35 AM	A56396
Zinc	0.020	0.0021	0.010		mg/L	1	12/8/2018 8:24:04 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.058	0.0010	0.0020		mg/L	1	11/26/2018 4:50:28 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 4:50:28 PM	41612
Chromium	0.0019	0.0018	0.0060	J	mg/L	1	11/26/2018 4:50:28 PM	41612
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 4:50:28 PM	41612
Iron	1.6	0.051	0.10	*	mg/L	5	11/27/2018 10:53:49 P	41612
Manganese	0.12	0.0011	0.0020	*	mg/L	1	11/26/2018 4:50:28 PM	41612
Silver	0.0068	0.0012	0.0050		mg/L	1	11/26/2018 4:50:28 PM	41612
Zinc	0.0078	0.0033	0.010	J	mg/L	1	12/5/2018 4:13:32 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0049	0.00042	0.0010		mg/L	1	11/28/2018 2:06:29 PM	B55939
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2018 2:06:29 PM	B55939
Selenium	0.00094	0.00076	0.0010	J	mg/L	1	11/28/2018 2:06:29 PM	B55939
Uranium	0.15	0.00096	0.0050	*	mg/L	10	11/30/2018 2:41:25 PM	B55992
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0074	0.0021	0.0050		mg/L	5	11/26/2018 6:04:47 PM	41612
Lead	0.0014	0.00023	0.00050		mg/L	1	11/20/2018 4:09:46 PM	41612
Selenium	ND	0.0049	0.0050		mg/L	5	11/26/2018 6:04:47 PM	41612
Uranium	0.14	0.00068	0.0050	*	mg/L	10	11/27/2018 4:41:37 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	11/28/2018 4:05:59 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzoic acid	ND	6.3	20		µg/L	1	11/19/2018 5:11:58 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 5:11:58 PM	41498
1-Methylnaphthalene	ND	7.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 5:11:58 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 5:11:58 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Naphthalene	ND	5.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 5:11:58 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 5:11:58 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 5:11:58 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 5:11:58 PM	41498
Surr: 2-Fluorophenol	4.57	0	15-74.1	S	%Rec	1	11/19/2018 5:11:58 PM	41498
Surr: Phenol-d5	15.7	0	15-59.8		%Rec	1	11/19/2018 5:11:58 PM	41498
Surr: 2,4,6-Tribromophenol	6.19	0	22.1-112	S	%Rec	1	11/19/2018 5:11:58 PM	41498
Surr: Nitrobenzene-d5	58.7	0	33.2-94		%Rec	1	11/19/2018 5:11:58 PM	41498
Surr: 2-Fluorobiphenyl	55.9	0	34-90.9		%Rec	1	11/19/2018 5:11:58 PM	41498
Surr: 4-Terphenyl-d14	47.1	0	15-149		%Rec	1	11/19/2018 5:11:58 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.35	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Toluene	ND	0.34	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Ethylbenzene	ND	0.45	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Methyl tert-butyl ether (MTBE)	7.7	0.91	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2,4-Trimethylbenzene	ND	0.51	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,3,5-Trimethylbenzene	ND	0.46	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2-Dichloroethane (EDC)	ND	0.38	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2-Dibromoethane (EDB)	ND	0.46	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Naphthalene	ND	0.58	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1-Methylnaphthalene	ND	0.67	8.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
2-Methylnaphthalene	ND	0.69	8.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Acetone	3.7	1.5	20	JD	µg/L	2	11/13/2018 11:46:09 A	R55623
Bromobenzene	ND	0.64	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Bromodichloromethane	ND	0.57	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Bromoform	ND	0.65	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Bromomethane	ND	0.55	6.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
2-Butanone	ND	2.8	20	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Carbon disulfide	ND	0.77	20	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Carbon Tetrachloride	ND	0.27	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Chlorobenzene	ND	0.58	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Chloroethane	ND	0.33	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Chloroform	ND	0.47	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Chloromethane	ND	0.64	6.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
2-Chlorotoluene	ND	0.50	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
4-Chlorotoluene	ND	0.56	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
cis-1,2-DCE	ND	0.75	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	0.60	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2-Dibromo-3-chloropropane	ND	0.94	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Dibromochloromethane	ND	0.47	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Dibromomethane	ND	0.64	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2-Dichlorobenzene	ND	0.62	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,3-Dichlorobenzene	ND	0.63	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,4-Dichlorobenzene	ND	0.58	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Dichlorodifluoromethane	ND	0.52	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1-Dichloroethane	ND	0.35	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1-Dichloroethene	ND	0.24	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2-Dichloropropane	ND	0.33	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,3-Dichloropropane	ND	0.54	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
2,2-Dichloropropane	ND	0.47	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1-Dichloropropene	ND	0.33	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Hexachlorobutadiene	ND	0.78	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
2-Hexanone	ND	1.8	20	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Isopropylbenzene	ND	0.44	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
4-Isopropyltoluene	ND	0.48	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
4-Methyl-2-pentanone	ND	0.91	20	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Methylene Chloride	1.8	0.41	6.0	JD	µg/L	2	11/13/2018 11:46:09 A	R55623
n-Butylbenzene	ND	0.50	6.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
n-Propylbenzene	ND	0.49	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
sec-Butylbenzene	ND	0.40	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Styrene	ND	0.50	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
tert-Butylbenzene	ND	0.44	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1,1,2-Tetrachloroethane	ND	0.50	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1,2,2-Tetrachloroethane	ND	0.66	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Tetrachloroethene (PCE)	ND	0.30	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
trans-1,2-DCE	ND	0.36	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
trans-1,3-Dichloropropene	ND	0.55	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2,3-Trichlorobenzene	ND	0.56	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2,4-Trichlorobenzene	ND	0.53	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1,1-Trichloroethane	ND	0.33	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,1,2-Trichloroethane	ND	0.47	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Trichloroethene (TCE)	ND	0.52	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Trichlorofluoromethane	ND	0.29	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
1,2,3-Trichloropropane	ND	1.1	4.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Vinyl chloride	ND	0.24	2.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623
Xylenes, Total	ND	1.3	3.0	D	µg/L	2	11/13/2018 11:46:09 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-59
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:34:00 AM
Lab ID: 1811442-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	93.5	0	70-130	D	%Rec	2	11/13/2018 11:46:09 A	R55623
Surr: 4-Bromofluorobenzene	140	0	70-130	SD	%Rec	2	11/13/2018 11:46:09 A	R55623
Surr: Dibromofluoromethane	92.7	0	70-130	D	%Rec	2	11/13/2018 11:46:09 A	R55623
Surr: Toluene-d8	103	0	70-130	D	%Rec	2	11/13/2018 11:46:09 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 10:10:03 A	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 10:10:03 A	41474
Surr: DNOP	112	0	76.7-135		%Rec	1	11/13/2018 10:10:03 A	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.31	0.024	0.050		mg/L	1	11/9/2018 11:10:57 AM	G55538
Surr: BFB	502	0	72.8-125	S	%Rec	1	11/9/2018 11:10:57 AM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 12:40:47 AM	R55509
Chloride	640	25	25		mg/L	50	11/20/2018 1:48:34 PM	R55800
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/9/2018 12:40:47 AM	R55509
Bromide	2.2	0.10	0.50		mg/L	5	11/9/2018 12:40:47 AM	R55509
Nitrogen, Nitrate (As N)	0.069	0.066	0.50	J	mg/L	5	11/9/2018 12:40:47 AM	R55509
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 12:40:47 AM	R55509
Sulfate	18	0.63	2.5		mg/L	5	11/9/2018 12:40:47 AM	R55509
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.45	0.00099	0.0020		mg/L	1	12/8/2018 8:26:28 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:26:28 PM	C56205
Calcium	89	0.078	1.0		mg/L	1	12/8/2018 8:26:28 PM	C56205
Chromium	ND	0.0013	0.0060		mg/L	1	12/8/2018 8:26:28 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:26:28 PM	C56205
Iron	0.13	0.016	0.020		mg/L	1	12/8/2018 8:26:28 PM	C56205
Magnesium	17	0.25	1.0		mg/L	1	12/8/2018 8:26:28 PM	C56205
Manganese	0.18	0.00039	0.0020	*	mg/L	1	12/8/2018 8:26:28 PM	C56205
Potassium	1.3	0.11	1.0		mg/L	1	12/8/2018 8:26:28 PM	C56205
Silver	ND	0.0018	0.0050		mg/L	1	12/8/2018 8:26:28 PM	C56205
Sodium	490	1.6	10		mg/L	10	12/17/2018 9:12:41 AM	A56396
Zinc	0.022	0.0021	0.010		mg/L	1	12/8/2018 8:26:28 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.50	0.0010	0.0020		mg/L	1	11/26/2018 4:52:32 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 4:52:32 PM	41612
Chromium	0.0043	0.0018	0.0060	J	mg/L	1	11/26/2018 4:52:32 PM	41612
Copper	0.0071	0.0041	0.0060		mg/L	1	11/26/2018 4:52:32 PM	41612
Iron	2.7	0.051	0.10	*	mg/L	5	11/27/2018 10:58:02 P	41612
Manganese	0.34	0.0011	0.0020	*	mg/L	1	11/26/2018 4:52:32 PM	41612
Silver	0.0031	0.0012	0.0050	J	mg/L	1	11/26/2018 4:52:32 PM	41612
Zinc	0.015	0.0033	0.010		mg/L	1	12/5/2018 4:15:42 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	11/28/2018 2:08:54 PM	B55939
Lead	0.00022	0.00017	0.00050	J	mg/L	1	11/28/2018 2:08:54 PM	B55939
Selenium	ND	0.00076	0.0010		mg/L	1	11/28/2018 2:08:54 PM	B55939
Uranium	0.015	0.000096	0.00050		mg/L	1	11/28/2018 2:08:54 PM	B55939
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0044	0.0021	0.0050	J	mg/L	5	11/26/2018 6:12:37 PM	41612
Lead	0.0032	0.00023	0.00050		mg/L	1	11/20/2018 4:15:49 PM	41612
Selenium	ND	0.0049	0.0050		mg/L	5	11/26/2018 6:12:37 PM	41612
Uranium	0.017	0.00034	0.0025		mg/L	5	11/27/2018 4:43:34 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	11/28/2018 4:08:14 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzoic acid	ND	6.3	20		µg/L	1	11/19/2018 5:41:26 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 5:41:26 PM	41498
1-Methylnaphthalene	ND	7.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 5:41:26 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 5:41:26 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Naphthalene	ND	5.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 5:41:26 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 5:41:26 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 5:41:26 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 5:41:26 PM	41498
Surr: 2-Fluorophenol	37.9	0	15-74.1		%Rec	1	11/19/2018 5:41:26 PM	41498
Surr: Phenol-d5	29.1	0	15-59.8		%Rec	1	11/19/2018 5:41:26 PM	41498
Surr: 2,4,6-Tribromophenol	57.4	0	22.1-112		%Rec	1	11/19/2018 5:41:26 PM	41498
Surr: Nitrobenzene-d5	60.2	0	33.2-94		%Rec	1	11/19/2018 5:41:26 PM	41498
Surr: 2-Fluorobiphenyl	55.0	0	34-90.9		%Rec	1	11/19/2018 5:41:26 PM	41498
Surr: 4-Terphenyl-d14	48.9	0	15-149		%Rec	1	11/19/2018 5:41:26 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	1.8	0.17	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Toluene	ND	0.17	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Methyl tert-butyl ether (MTBE)	62	0.46	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2-Dichloroethane (EDC)	13	0.19	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Naphthalene	ND	0.29	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Acetone	ND	0.76	10		µg/L	1	11/9/2018 3:23:01 PM	R55556
Bromobenzene	ND	0.32	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Bromoform	ND	0.32	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Bromomethane	ND	0.27	3.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
2-Butanone	ND	1.4	10		µg/L	1	11/9/2018 3:23:01 PM	R55556
Carbon disulfide	ND	0.39	10		µg/L	1	11/9/2018 3:23:01 PM	R55556
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Chloroethane	ND	0.16	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Chloroform	ND	0.24	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Chloromethane	ND	0.32	3.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Dibromomethane	ND	0.32	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1-Dichloroethane	0.57	0.18	1.0	J	µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
2-Hexanone	ND	0.91	10		µg/L	1	11/9/2018 3:23:01 PM	R55556
Isopropylbenzene	2.3	0.22	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/9/2018 3:23:01 PM	R55556
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
n-Butylbenzene	0.35	0.25	3.0	J	µg/L	1	11/9/2018 3:23:01 PM	R55556
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
sec-Butylbenzene	0.51	0.20	1.0	J	µg/L	1	11/9/2018 3:23:01 PM	R55556
Styrene	ND	0.25	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/9/2018 3:23:01 PM	R55556
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/9/2018 3:23:01 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-56
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:05:00 AM
Lab ID: 1811442-005
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	96.8	0	70-130		%Rec	1	11/9/2018 3:23:01 PM	R55556
Surr: 4-Bromofluorobenzene	119	0	70-130		%Rec	1	11/9/2018 3:23:01 PM	R55556
Surr: Dibromofluoromethane	99.9	0	70-130		%Rec	1	11/9/2018 3:23:01 PM	R55556
Surr: Toluene-d8	105	0	70-130		%Rec	1	11/9/2018 3:23:01 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	2.8	0.63	1.0		mg/L	1	11/13/2018 10:32:07 A	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 10:32:07 A	41474
Surr: DNOP	113	0	76.7-135		%Rec	1	11/13/2018 10:32:07 A	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	0.49	1.0		mg/L	20	11/9/2018 11:33:45 AM	G55538
Surr: BFB	107	0	72.8-125		%Rec	20	11/9/2018 11:33:45 AM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 1:05:36 AM	R55509
Chloride	280	10	10		mg/L	20	11/9/2018 1:18:01 AM	R55509
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/9/2018 1:05:36 AM	R55509
Bromide	1.2	0.10	0.50		mg/L	5	11/9/2018 1:05:36 AM	R55509
Nitrogen, Nitrate (As N)	0.084	0.066	0.50	J	mg/L	5	11/9/2018 1:05:36 AM	R55509
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 1:05:36 AM	R55509
Sulfate	2.1	0.63	2.5	J	mg/L	5	11/9/2018 1:05:36 AM	R55509
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.50	0.00099	0.0020		mg/L	1	12/8/2018 8:28:47 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:28:47 PM	C56205
Calcium	100	0.39	5.0		mg/L	5	12/17/2018 9:14:49 AM	A56396
Chromium	ND	0.0013	0.0060		mg/L	1	12/8/2018 8:28:47 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:28:47 PM	C56205
Iron	3.4	0.082	0.10	*	mg/L	5	12/17/2018 9:14:49 AM	A56396
Magnesium	29	0.25	1.0		mg/L	1	12/8/2018 8:28:47 PM	C56205
Manganese	3.5	0.0020	0.010	*	mg/L	5	12/17/2018 9:14:49 AM	A56396
Potassium	0.18	0.11	1.0	J	mg/L	1	12/8/2018 8:28:47 PM	C56205
Silver	ND	0.0018	0.0050		mg/L	1	12/8/2018 8:28:47 PM	C56205
Sodium	350	0.82	5.0		mg/L	5	12/17/2018 9:14:49 AM	A56396
Zinc	0.015	0.0021	0.010		mg/L	1	12/8/2018 8:28:47 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.50	0.0010	0.0020		mg/L	1	11/26/2018 5:00:43 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 5:00:43 PM	41612
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 5:00:43 PM	41612
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 5:00:43 PM	41612
Iron	4.3	0.051	0.10	*	mg/L	5	11/27/2018 11:02:02 P	41612
Manganese	3.6	0.0055	0.010	*	mg/L	5	11/27/2018 11:02:02 P	41612
Silver	0.0038	0.0012	0.0050	J	mg/L	1	11/26/2018 5:00:43 PM	41612
Zinc	0.0046	0.0033	0.010	J	mg/L	1	12/5/2018 4:17:50 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0044	0.00042	0.0010		mg/L	1	11/28/2018 2:11:19 PM	B55939
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2018 2:11:19 PM	B55939
Selenium	ND	0.00076	0.0010		mg/L	1	11/28/2018 2:11:19 PM	B55939
Uranium	0.0051	0.000096	0.00050		mg/L	1	11/28/2018 2:11:19 PM	B55939
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0063	0.0021	0.0050		mg/L	5	11/26/2018 6:14:34 PM	41612
Lead	0.0012	0.00023	0.00050		mg/L	1	11/20/2018 4:17:49 PM	41612
Selenium	ND	0.0049	0.0050		mg/L	5	11/26/2018 6:14:34 PM	41612
Uranium	0.0056	0.000068	0.00050		mg/L	1	11/27/2018 4:50:06 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	11/28/2018 4:10:29 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzoic acid	ND	6.3	20		µg/L	1	11/19/2018 6:10:42 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 6:10:42 PM	41498
1-Methylnaphthalene	15	7.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 6:10:42 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 6:10:42 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Naphthalene	16	5.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 6:10:42 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 6:10:42 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	19	6.0	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 6:10:42 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 6:10:42 PM	41498
Surr: 2-Fluorophenol	42.2	0	15-74.1		%Rec	1	11/19/2018 6:10:42 PM	41498
Surr: Phenol-d5	30.2	0	15-59.8		%Rec	1	11/19/2018 6:10:42 PM	41498
Surr: 2,4,6-Tribromophenol	73.6	0	22.1-112		%Rec	1	11/19/2018 6:10:42 PM	41498
Surr: Nitrobenzene-d5	65.3	0	33.2-94		%Rec	1	11/19/2018 6:10:42 PM	41498
Surr: 2-Fluorobiphenyl	61.6	0	34-90.9		%Rec	1	11/19/2018 6:10:42 PM	41498
Surr: 4-Terphenyl-d14	59.3	0	15-149		%Rec	1	11/19/2018 6:10:42 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	7000	35	200		µg/L	200	11/9/2018 3:51:41 PM	R55556
Toluene	350	3.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Ethylbenzene	750	4.5	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Methyl tert-butyl ether (MTBE)	1300	9.1	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2,4-Trimethylbenzene	130	5.1	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,3,5-Trimethylbenzene	29	4.6	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2-Dichloroethane (EDC)	5.7	3.8	20	J	µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Naphthalene	36	5.8	40	J	µg/L	20	11/9/2018 4:20:18 PM	R55556
1-Methylnaphthalene	20	6.7	80	J	µg/L	20	11/9/2018 4:20:18 PM	R55556
2-Methylnaphthalene	7.5	6.9	80	J	µg/L	20	11/9/2018 4:20:18 PM	R55556
Acetone	ND	15	200		µg/L	20	11/9/2018 4:20:18 PM	R55556
Bromobenzene	ND	6.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Bromodichloromethane	ND	5.7	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Bromoform	ND	6.5	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Bromomethane	ND	5.5	60		µg/L	20	11/9/2018 4:20:18 PM	R55556
2-Butanone	ND	28	200		µg/L	20	11/9/2018 4:20:18 PM	R55556
Carbon disulfide	ND	7.7	200		µg/L	20	11/9/2018 4:20:18 PM	R55556
Carbon Tetrachloride	ND	2.7	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Chlorobenzene	ND	5.8	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Chloroethane	ND	3.3	40		µg/L	20	11/9/2018 4:20:18 PM	R55556
Chloroform	ND	4.7	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Chloromethane	ND	6.4	60		µg/L	20	11/9/2018 4:20:18 PM	R55556
2-Chlorotoluene	ND	5.0	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
4-Chlorotoluene	ND	5.6	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
cis-1,2-DCE	ND	7.5	20		µg/L	20	11/9/2018 4:20:18 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	11/9/2018 4:20:18 PM	R55556
Dibromochloromethane	ND	4.7	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Dibromomethane	ND	6.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1-Dichloroethane	ND	3.5	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1-Dichloroethene	ND	2.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2-Dichloropropane	ND	3.3	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,3-Dichloropropane	ND	5.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
2,2-Dichloropropane	ND	4.7	40		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1-Dichloropropene	ND	3.3	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Hexachlorobutadiene	ND	7.8	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
2-Hexanone	ND	18	200		µg/L	20	11/9/2018 4:20:18 PM	R55556
Isopropylbenzene	28	4.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
4-Isopropyltoluene	ND	4.8	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	11/9/2018 4:20:18 PM	R55556
Methylene Chloride	ND	4.1	60		µg/L	20	11/9/2018 4:20:18 PM	R55556
n-Butylbenzene	ND	5.0	60		µg/L	20	11/9/2018 4:20:18 PM	R55556
n-Propylbenzene	70	4.9	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
sec-Butylbenzene	5.4	4.0	20	J	µg/L	20	11/9/2018 4:20:18 PM	R55556
Styrene	ND	5.0	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
tert-Butylbenzene	ND	4.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	11/9/2018 4:20:18 PM	R55556
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
trans-1,2-DCE	ND	3.6	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Trichlorofluoromethane	ND	2.9	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
1,2,3-Trichloropropane	ND	11	40		µg/L	20	11/9/2018 4:20:18 PM	R55556
Vinyl chloride	ND	2.4	20		µg/L	20	11/9/2018 4:20:18 PM	R55556
Xylenes, Total	380	13	30		µg/L	20	11/9/2018 4:20:18 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-55
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:42:00 AM
Lab ID: 1811442-006
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	97.8	0	70-130		%Rec	20	11/9/2018 4:20:18 PM	R55556
Surr: 4-Bromofluorobenzene	99.6	0	70-130		%Rec	20	11/9/2018 4:20:18 PM	R55556
Surr: Dibromofluoromethane	98.3	0	70-130		%Rec	20	11/9/2018 4:20:18 PM	R55556
Surr: Toluene-d8	108	0	70-130		%Rec	20	11/9/2018 4:20:18 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.9	0.63	1.0		mg/L	1	11/13/2018 10:53:53 A	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 10:53:53 A	41474
Surr: DNOP	113	0	76.7-135		%Rec	1	11/13/2018 10:53:53 A	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.6	0.024	0.050		mg/L	1	11/9/2018 1:04:13 PM	G55538
Surr: BFB	94.5	0	72.8-125		%Rec	1	11/9/2018 1:04:13 PM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 1:30:25 AM	R55509
Chloride	250	10	10		mg/L	20	11/9/2018 1:42:51 AM	R55509
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/9/2018 1:30:25 AM	R55509
Bromide	2.2	0.10	0.50		mg/L	5	11/9/2018 1:30:25 AM	R55509
Nitrogen, Nitrate (As N)	0.12	0.066	0.50	J	mg/L	5	11/9/2018 1:30:25 AM	R55509
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 1:30:25 AM	R55509
Sulfate	33	0.63	2.5		mg/L	5	11/9/2018 1:30:25 AM	R55509
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.15	0.00099	0.0020		mg/L	1	12/8/2018 8:31:03 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:31:03 PM	C56205
Calcium	59	0.078	1.0		mg/L	1	12/8/2018 8:31:03 PM	C56205
Chromium	ND	0.0013	0.0060		mg/L	1	12/8/2018 8:31:03 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:31:03 PM	C56205
Iron	0.32	0.016	0.020	*	mg/L	1	12/8/2018 8:31:03 PM	C56205
Magnesium	17	0.25	1.0		mg/L	1	12/8/2018 8:31:03 PM	C56205
Manganese	1.5	0.0039	0.020	*	mg/L	10	12/17/2018 9:18:58 AM	A56396
Potassium	0.25	0.11	1.0	J	mg/L	1	12/8/2018 8:31:03 PM	C56205
Silver	ND	0.0018	0.0050		mg/L	1	12/8/2018 8:31:03 PM	C56205
Sodium	430	1.6	10		mg/L	10	12/17/2018 9:18:58 AM	A56396
Zinc	0.025	0.0021	0.010		mg/L	1	12/8/2018 8:31:03 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.19	0.0010	0.0020		mg/L	1	11/26/2018 5:02:55 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 5:02:55 PM	41612
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 5:02:55 PM	41612
Copper	0.015	0.0041	0.0060		mg/L	1	11/26/2018 5:02:55 PM	41612
Iron	0.94	0.010	0.020	*	mg/L	1	11/27/2018 11:04:02 P	41612
Manganese	1.3	0.0055	0.010	*	mg/L	5	11/27/2018 11:14:25 P	41612
Silver	0.0021	0.0012	0.0050	J	mg/L	1	11/26/2018 5:02:55 PM	41612
Zinc	0.0059	0.0033	0.010	J	mg/L	1	12/5/2018 4:20:01 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0026	0.00042	0.0010		mg/L	1	11/28/2018 2:13:44 PM	B55939
Lead	0.010	0.00017	0.00050		mg/L	1	11/28/2018 2:13:44 PM	B55939
Selenium	ND	0.00076	0.0010		mg/L	1	11/28/2018 2:13:44 PM	B55939
Uranium	0.059	0.00048	0.0025	*	mg/L	5	11/30/2018 2:43:49 PM	B55992
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0036	0.0021	0.0050	J	mg/L	5	11/26/2018 6:16:31 PM	41612
Lead	0.013	0.00023	0.00050		mg/L	1	11/20/2018 4:19:49 PM	41612
Selenium	ND	0.0049	0.0050		mg/L	5	11/26/2018 6:16:31 PM	41612
Uranium	0.062	0.00034	0.0025	*	mg/L	5	11/27/2018 4:52:03 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	11/28/2018 4:12:45 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Benzoic acid	18	6.3	20	J	µg/L	1	11/19/2018 6:39:53 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Bis(2-ethylhexyl)phthalate	10	8.1	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 6:39:53 PM	41498
1-Methylnaphthalene	ND	7.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 6:39:53 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 6:39:53 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Naphthalene	ND	5.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 6:39:53 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 6:39:53 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 6:39:53 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 6:39:53 PM	41498
Surr: 2-Fluorophenol	53.7	0	15-74.1		%Rec	1	11/19/2018 6:39:53 PM	41498
Surr: Phenol-d5	44.2	0	15-59.8		%Rec	1	11/19/2018 6:39:53 PM	41498
Surr: 2,4,6-Tribromophenol	83.9	0	22.1-112		%Rec	1	11/19/2018 6:39:53 PM	41498
Surr: Nitrobenzene-d5	83.6	0	33.2-94		%Rec	1	11/19/2018 6:39:53 PM	41498
Surr: 2-Fluorobiphenyl	74.6	0	34-90.9		%Rec	1	11/19/2018 6:39:53 PM	41498
Surr: 4-Terphenyl-d14	65.9	0	15-149		%Rec	1	11/19/2018 6:39:53 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	52	0.17	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Toluene	1.1	0.17	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Ethylbenzene	15	0.22	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Methyl tert-butyl ether (MTBE)	1500	4.6	10		µg/L	10	11/12/2018 12:33:56 P	R55593
1,2,4-Trimethylbenzene	10	0.25	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2-Dichloroethane (EDC)	0.60	0.19	1.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Naphthalene	0.99	0.29	2.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
1-Methylnaphthalene	0.47	0.34	4.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Acetone	ND	0.76	10		µg/L	1	11/9/2018 4:48:48 PM	R55556
Bromobenzene	ND	0.32	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Bromoform	ND	0.32	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Bromomethane	ND	0.27	3.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
2-Butanone	ND	1.4	10		µg/L	1	11/9/2018 4:48:48 PM	R55556
Carbon disulfide	ND	0.39	10		µg/L	1	11/9/2018 4:48:48 PM	R55556
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Chloroethane	ND	0.16	2.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Chloroform	ND	0.24	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Chloromethane	ND	0.32	3.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Dibromomethane	ND	0.32	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
2-Hexanone	ND	0.91	10		µg/L	1	11/9/2018 4:48:48 PM	R55556
Isopropylbenzene	0.51	0.22	1.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/9/2018 4:48:48 PM	R55556
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
n-Butylbenzene	0.29	0.25	3.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
n-Propylbenzene	2.1	0.24	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
sec-Butylbenzene	0.95	0.20	1.0	J	µg/L	1	11/9/2018 4:48:48 PM	R55556
Styrene	ND	0.25	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/9/2018 4:48:48 PM	R55556
Xylenes, Total	1.0	0.64	1.5	J	µg/L	1	11/9/2018 4:48:48 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-54
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 8:15:00 AM
Lab ID: 1811442-007
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	95.0	0	70-130		%Rec	1	11/9/2018 4:48:48 PM	R55556
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	11/9/2018 4:48:48 PM	R55556
Surr: Dibromofluoromethane	95.3	0	70-130		%Rec	1	11/9/2018 4:48:48 PM	R55556
Surr: Toluene-d8	108	0	70-130		%Rec	1	11/9/2018 4:48:48 PM	R55556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 11:15:23 A	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 11:15:23 A	41474
Surr: DNOP	118	0	76.7-135		%Rec	1	11/13/2018 11:15:23 A	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.15	0.024	0.050		mg/L	1	11/9/2018 1:26:47 PM	G55538
Surr: BFB	5610	0	72.8-125	S	%Rec	1	11/9/2018 1:26:47 PM	G55538
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 2:20:05 AM	R55509
Chloride	1900	100	100		mg/L	200	11/20/2018 2:01:26 PM	R55800
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/9/2018 2:32:29 AM	R55509
Bromide	2.9	0.10	0.50		mg/L	5	11/9/2018 2:20:05 AM	R55509
Nitrogen, Nitrate (As N)	ND	0.066	0.50		mg/L	5	11/9/2018 2:20:05 AM	R55509
Phosphorus, Orthophosphate (As P)	ND	10	10		mg/L	20	11/9/2018 2:32:29 AM	R55509
Sulfate	2500	25	100		mg/L	200	11/20/2018 2:01:26 PM	R55800
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**	
Barium	0.011	0.00099	0.0020		mg/L	1	12/8/2018 8:33:09 PM	C56205
Cadmium	ND	0.0010	0.0020		mg/L	1	12/8/2018 8:33:09 PM	C56205
Calcium	210	0.78	10		mg/L	10	12/17/2018 9:28:04 AM	A56396
Chromium	ND	0.0013	0.0060		mg/L	1	12/8/2018 8:33:09 PM	C56205
Copper	ND	0.0032	0.0060		mg/L	1	12/8/2018 8:33:09 PM	C56205
Iron	0.020	0.016	0.020	J	mg/L	1	12/8/2018 8:33:09 PM	C56205
Magnesium	62	0.25	1.0		mg/L	1	12/8/2018 8:33:09 PM	C56205
Manganese	0.029	0.00039	0.0020		mg/L	1	12/8/2018 8:33:09 PM	C56205
Potassium	0.90	0.11	1.0	J	mg/L	1	12/8/2018 8:33:09 PM	C56205
Silver	0.0053	0.0018	0.0050		mg/L	1	12/8/2018 8:33:09 PM	C56205
Sodium	2500	8.2	50		mg/L	50	12/17/2018 9:30:21 AM	A56396
Zinc	0.013	0.0021	0.010		mg/L	1	12/8/2018 8:33:09 PM	C56205
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.050	0.0010	0.0020		mg/L	1	11/26/2018 5:04:53 PM	41612
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 5:04:53 PM	41612
Chromium	0.0020	0.0018	0.0060	J	mg/L	1	11/26/2018 5:04:53 PM	41612
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 5:04:53 PM	41612
Iron	1.6	0.051	0.10	*	mg/L	5	11/27/2018 11:18:39 P	41612
Manganese	0.092	0.0011	0.0020	*	mg/L	1	11/26/2018 5:04:53 PM	41612
Silver	0.0069	0.0012	0.0050		mg/L	1	11/26/2018 5:04:53 PM	41612
Zinc	0.0050	0.0033	0.010	J	mg/L	1	12/5/2018 4:36:29 PM	41782
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0049	0.00042	0.0010		mg/L	1	11/28/2018 2:16:09 PM	B55939
Lead	ND	0.00017	0.00050		mg/L	1	11/28/2018 2:16:09 PM	B55939
Selenium	0.0010	0.00076	0.0010		mg/L	1	11/28/2018 2:16:09 PM	B55939
Uranium	0.14	0.00096	0.0050	*	mg/L	10	11/30/2018 2:46:14 PM	B55992
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0073	0.00041	0.0010		mg/L	1	11/26/2018 6:18:28 PM	41612
Lead	0.0011	0.00023	0.00050		mg/L	1	11/26/2018 6:18:28 PM	41612
Selenium	0.0017	0.00098	0.0010		mg/L	1	11/26/2018 6:18:28 PM	41612
Uranium	0.14	0.00068	0.0050	*	mg/L	10	11/27/2018 5:05:41 PM	41612
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	ND	0.000038	0.00020		mg/L	1	11/28/2018 4:19:39 PM	41759
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Acenaphthylene	ND	6.2	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Aniline	ND	6.2	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Anthracene	ND	5.7	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Azobenzene	ND	6.7	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benz(a)anthracene	ND	5.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benzo(a)pyrene	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Benzoic acid	17	6.3	20	J	µg/L	1	11/19/2018 7:09:01 PM	41498
Benzyl alcohol	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Bis(2-ethylhexyl)phthalate	8.9	8.1	10	J	µg/L	1	11/19/2018 7:09:01 PM	41498
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Carbazole	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4-Chloroaniline	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Chloronaphthalene	ND	6.1	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Chlorophenol	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Chrysene	ND	6.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Dibenzofuran	ND	6.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Diethyl phthalate	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Dimethyl phthalate	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Fluoranthene	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Fluorene	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Hexachlorobenzene	ND	6.2	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Hexachlorobutadiene	ND	6.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Hexachloroethane	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Isophorone	ND	6.2	10		µg/L	1	11/19/2018 7:09:01 PM	41498
1-Methylnaphthalene	ND	7.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Methylnaphthalene	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Methylphenol	ND	6.3	10		µg/L	1	11/19/2018 7:09:01 PM	41498
3+4-Methylphenol	ND	5.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	11/19/2018 7:09:01 PM	41498
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Naphthalene	ND	5.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Nitroaniline	ND	5.9	10		µg/L	1	11/19/2018 7:09:01 PM	41498
3-Nitroaniline	ND	6.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4-Nitroaniline	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Nitrobenzene	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2-Nitrophenol	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
4-Nitrophenol	ND	5.6	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Pentachlorophenol	ND	5.3	20		µg/L	1	11/19/2018 7:09:01 PM	41498
Phenanthrene	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Pyrene	ND	6.5	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Pyridine	ND	5.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	11/19/2018 7:09:01 PM	41498
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	11/19/2018 7:09:01 PM	41498
Surr: 2-Fluorophenol	20.7	0	15-74.1		%Rec	1	11/19/2018 7:09:01 PM	41498
Surr: Phenol-d5	33.5	0	15-59.8		%Rec	1	11/19/2018 7:09:01 PM	41498
Surr: 2,4,6-Tribromophenol	31.3	0	22.1-112		%Rec	1	11/19/2018 7:09:01 PM	41498
Surr: Nitrobenzene-d5	83.2	0	33.2-94		%Rec	1	11/19/2018 7:09:01 PM	41498
Surr: 2-Fluorobiphenyl	67.0	0	34-90.9		%Rec	1	11/19/2018 7:09:01 PM	41498
Surr: 4-Terphenyl-d14	61.5	0	15-149		%Rec	1	11/19/2018 7:09:01 PM	41498
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.35	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Toluene	ND	0.34	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Ethylbenzene	ND	0.45	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Methyl tert-butyl ether (MTBE)	8.0	0.91	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2,4-Trimethylbenzene	ND	0.51	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,3,5-Trimethylbenzene	ND	0.46	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2-Dichloroethane (EDC)	ND	0.38	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2-Dibromoethane (EDB)	ND	0.46	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Naphthalene	ND	0.58	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1-Methylnaphthalene	ND	0.67	8.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
2-Methylnaphthalene	ND	0.69	8.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Acetone	4.3	1.5	20	JD	µg/L	2	11/13/2018 12:14:42 P	R55623
Bromobenzene	ND	0.64	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Bromodichloromethane	ND	0.57	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Bromoform	ND	0.65	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Bromomethane	ND	0.55	6.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
2-Butanone	ND	2.8	20	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Carbon disulfide	ND	0.77	20	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Carbon Tetrachloride	ND	0.27	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Chlorobenzene	ND	0.58	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Chloroethane	ND	0.33	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Chloroform	ND	0.47	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Chloromethane	ND	0.64	6.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
2-Chlorotoluene	ND	0.50	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
4-Chlorotoluene	ND	0.56	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
cis-1,2-DCE	ND	0.75	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
cis-1,3-Dichloropropene	ND	0.60	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2-Dibromo-3-chloropropane	ND	0.94	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Dibromochloromethane	ND	0.47	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Dibromomethane	ND	0.64	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2-Dichlorobenzene	ND	0.62	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,3-Dichlorobenzene	ND	0.63	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,4-Dichlorobenzene	ND	0.58	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Dichlorodifluoromethane	ND	0.52	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1-Dichloroethane	ND	0.35	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1-Dichloroethene	ND	0.24	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2-Dichloropropane	ND	0.33	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,3-Dichloropropane	ND	0.54	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
2,2-Dichloropropane	ND	0.47	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1-Dichloropropene	ND	0.33	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Hexachlorobutadiene	ND	0.78	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
2-Hexanone	ND	1.8	20	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Isopropylbenzene	ND	0.44	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
4-Isopropyltoluene	ND	0.48	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
4-Methyl-2-pentanone	ND	0.91	20	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Methylene Chloride	ND	0.41	6.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
n-Butylbenzene	ND	0.50	6.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
n-Propylbenzene	ND	0.49	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
sec-Butylbenzene	ND	0.40	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Styrene	ND	0.50	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
tert-Butylbenzene	ND	0.44	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1,1,2-Tetrachloroethane	ND	0.50	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1,2,2-Tetrachloroethane	ND	0.66	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Tetrachloroethene (PCE)	ND	0.30	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
trans-1,2-DCE	ND	0.36	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
trans-1,3-Dichloropropene	ND	0.55	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2,3-Trichlorobenzene	ND	0.56	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2,4-Trichlorobenzene	ND	0.53	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1,1-Trichloroethane	ND	0.33	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,1,2-Trichloroethane	ND	0.47	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Trichloroethene (TCE)	ND	0.52	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Trichlorofluoromethane	ND	0.29	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
1,2,3-Trichloropropane	ND	1.1	4.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Vinyl chloride	ND	0.24	2.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623
Xylenes, Total	ND	1.3	3.0	D	µg/L	2	11/13/2018 12:14:42 P	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 2018 4th Quarter OW Wells
Collection Date: 11/7/2018 9:46:00 AM
Lab ID: 1811442-008
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Surr: 1,2-Dichloroethane-d4	94.6	0	70-130	D	%Rec	2	11/13/2018 12:14:42 P	R55623
Surr: 4-Bromofluorobenzene	136	0	70-130	SD	%Rec	2	11/13/2018 12:14:42 P	R55623
Surr: Dibromofluoromethane	90.7	0	70-130	D	%Rec	2	11/13/2018 12:14:42 P	R55623
Surr: Toluene-d8	98.9	0	70-130	D	%Rec	2	11/13/2018 12:14:42 P	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56205**	RunNo: **56205**
Prep Date:	Analysis Date: **12/8/2018**	SeqNo: **1877513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56205**	RunNo: **56205**
Prep Date:	Analysis Date: **12/8/2018**	SeqNo: **1877514** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	106	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Calcium	0.50	1.0	0.5000	0	99.5	50	150			J
Chromium	0.0066	0.0060	0.006000	0	111	50	150			
Copper	0.0039	0.0060	0.006000	0	65.4	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0020	0.0020	0.002000	0	100	50	150			J
Potassium	0.56	1.0	0.5000	0	112	50	150			J
Silver	0.0050	0.0050	0.005000	0	99.1	50	150			J
Zinc	0.0057	0.010	0.005000	0	113	50	150			J

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56205**	RunNo: **56205**
Prep Date:	Analysis Date: **12/8/2018**	SeqNo: **1877518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.4	85	115			
Cadmium	0.48	0.0020	0.5000	0	95.5	85	115			
Calcium	49	1.0	50.00	0	97.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.49	0.020	0.5000	0	98.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C56205**	RunNo:	**56205**					
Prep Date:		Analysis Date:	**12/8/2018**	SeqNo:	**1877518**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.47	0.0020	0.5000	0	93.6	85	115			
Potassium	49	1.0	50.00	0	98.2	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.47	0.010	0.5000	0	94.6	85	115			

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A56396**	RunNo:	**56396**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885218**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A56396**	RunNo:	**56396**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885219**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	98.9	85	115			
Iron	0.48	0.020	0.5000	0	96.0	85	115			
Manganese	0.47	0.0020	0.5000	0	95.0	85	115			
Sodium	49	1.0	50.00	0	97.7	85	115			

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A56396**	RunNo:	**56396**					
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885220**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.51	1.0	0.5000	0	103	50	150			J
Iron	0.022	0.020	0.02000	0	108	50	150			
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Sodium	0.51	1.0	0.5000	0	102	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**MB-41612**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**41612**	RunNo:	**55850**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1864100**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								

Sample ID	**LLLCS-41612**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**41612**	RunNo:	**55850**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1864101**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	101	50	150			
Cadmium	0.0023	0.0020	0.002000	0	116	50	150			
Chromium	0.0060	0.0060	0.006000	0	100	50	150			
Copper	0.0068	0.0060	0.006000	0	113	50	150			
Iron	0.025	0.020	0.02000	0	123	50	150			
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Silver	0.0052	0.0050	0.005000	0	103	50	150			

Sample ID	**LCS-41612**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**41612**	RunNo:	**55850**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1864102**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.51	0.0060	0.5000	0	101	85	115			
Copper	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID	**1811442-007FMS**	SampType:	**MS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**OW-54**	Batch ID:	**41782**	RunNo:	**56108**					
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1874142**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.47	0.010	0.5000	0.005938	93.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**1811442-007FMSD**	SampType:	**MSD**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**OW-54**	Batch ID:	**41782**		RunNo:	**56108**				
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874147**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.47	0.010	0.5000	0.005938	92.5	70	130	1.35	20	

Sample ID	**MB-41782**	SampType:	**MBLK**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**PBW**	Batch ID:	**41782**		RunNo:	**56108**				
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874270**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Sample ID	**LCS-41782**	SampType:	**LCS**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**LCSW**	Batch ID:	**41782**		RunNo:	**56108**				
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874271**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.49	0.010	0.5000	0	98.6	85	115			

Sample ID	**LLLCS-41782**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**				
Client ID:	**BatchQC**	Batch ID:	**41782**		RunNo:	**56108**				
Prep Date:	**11/29/2018**	Analysis Date:	**12/5/2018**		SeqNo:	**1874272**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.0069	0.010	0.005000	0	138	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B55939**	RunNo:	**55939**					
Prep Date:		Analysis Date:	**11/28/2018**	SeqNo:	**1866874**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B55939**	RunNo:	**55939**					
Prep Date:		Analysis Date:	**11/28/2018**	SeqNo:	**1866875**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	85	115			
Lead	0.013	0.00050	0.01250	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	96.7	85	115			
Uranium	0.012	0.00050	0.01250	0	98.4	85	115			

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B55939**	RunNo:	**55939**					
Prep Date:		Analysis Date:	**11/28/2018**	SeqNo:	**1866937**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00098	0.0010	0.001000	0	98.0	50	150			J
Lead	0.00050	0.00050	0.0005000	0	99.7	50	150			J
Selenium	0.00079	0.0010	0.001000	0	79.1	50	150			J
Uranium	0.00049	0.00050	0.0005000	0	97.2	50	150			J

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B55992**	RunNo:	**55992**					
Prep Date:		Analysis Date:	**11/30/2018**	SeqNo:	**1869145**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	107	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B55992**	RunNo:	**55992**					
Prep Date:		Analysis Date:	**11/30/2018**	SeqNo:	**1869166**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**LLLCS**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B55992**	RunNo:	**55992**
Prep Date:		Analysis Date:	**11/30/2018**	SeqNo:	**1869167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	103	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**MB-41612**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41612**	RunNo:	**55764**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/20/2018**	SeqNo:	**1859648**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41612**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41612**	RunNo:	**55764**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/20/2018**	SeqNo:	**1859650**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Selenium	0.00061	0.0010	0.001000	0	61.2	50	150			J
Uranium	0.00053	0.00050	0.0005000	0	106	50	150			

Sample ID	**MSLCS-41612**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41612**	RunNo:	**55764**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/20/2018**	SeqNo:	**1859652**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0	106	85	115			
Lead	0.014	0.00050	0.01250	0	109	85	115			
Selenium	0.026	0.0010	0.02500	0	106	85	115			
Uranium	0.014	0.00050	0.01250	0	111	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**MB-41759**	SampType: **MBLK**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID: **41759**	RunNo: **55928**
Prep Date:	**11/28/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-41759**	SampType: **LCS**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID: **41759**	RunNo: **55928**
Prep Date:	**11/28/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.3	80	120			

Sample ID	**1811442-003FMS**	SampType: **MS**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**OW-60**	Batch ID: **41759**	RunNo: **55928**
Prep Date:	**11/28/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	.00004517	99.1	75	125			

Sample ID	**1811442-003FMSD**	SampType: **MSD**	TestCode: **EPA Method 245.1: Mercury**
Client ID:	**OW-60**	Batch ID: **41759**	RunNo: **55928**
Prep Date:	**11/28/2018**	Analysis Date: **11/28/2018**	SeqNo: **1866096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	.00004517	99.3	75	125	0.192	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55509**	RunNo: **55509**
Prep Date:	Analysis Date: **11/8/2018**	SeqNo: **1848629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55509**	RunNo: **55509**
Prep Date:	Analysis Date: **11/8/2018**	SeqNo: **1848630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0	111	90	110			S
Chloride	5.0	0.50	5.000	0	99.3	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	102	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	106	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	102	90	110			
Sulfate	9.9	0.50	10.00	0	98.5	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55800**	RunNo: **55800**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.9	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Sulfate	10	0.50	10.00	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **LCS-41474**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41474**	RunNo: **55605**
Prep Date: **11/12/2018**	Analysis Date: **11/13/2018**	SeqNo: **1851933** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	88.1	70	130			
Surr: DNOP	0.51		0.5000		102	76.7	135			

Sample ID **MB-41474**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41474**	RunNo: **55605**
Prep Date: **11/12/2018**	Analysis Date: **11/13/2018**	SeqNo: **1851934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.2	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	79.5	127			
Surr: BFB	22		20.00		108	72.8	125			

Sample ID **1811442-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	1.0	10.00	21.37	103	52.5	149			
Surr: BFB	480		400.0		119	72.8	125			

Sample ID **1811442-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-55**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	1.0	10.00	21.37	93.3	52.5	149	3.07	20	
Surr: BFB	490		400.0		123	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55556**	RunNo: **55556**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850063** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.1	70	130			
Toluene	20	1.0	20.00	0	99.7	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **1811442-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Field Blank**	Batch ID: **R55556**	RunNo: **55556**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.9	60.5	137			
Toluene	20	1.0	20.00	0.2094	101	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		115	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.7	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **1811442-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Field Blank**	Batch ID: **R55556**	RunNo: **55556**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850077** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.4	60.5	137	0.543	20	
Toluene	19	1.0	20.00	0.2094	96.0	70	130	5.49	20	
Chlorobenzene	21	1.0	20.00	0	106	70	130	0.534	20	
1,1-Dichloroethene	17	1.0	20.00	0	85.8	70	130	7.81	20	
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130	6.21	20	
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		97.5	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55556**	RunNo: **55556**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850086** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	0.21	1.0								J
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	0.93	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	0.92	3.0								J
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55556**	RunNo: **55556**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850086** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.3	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55593**	RunNo: **55593**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851330** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55593**	RunNo: **55593**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851330** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	11		10.00		109	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55593**	RunNo: **55593**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851332** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.1	70	130			
Toluene	19	1.0	20.00	0	95.7	70	130			
Chlorobenzene	19	1.0	20.00	0	96.4	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**
27-Dec-18

Client: Marathon
Project: 2018 4th Quarter OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**
27-Dec-18

Client: Marathon
Project: 2018 4th Quarter OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **lcs-41498**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41498**	RunNo: **55757**
Prep Date: **11/13/2018**	Analysis Date: **11/19/2018**	SeqNo: **1858273** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.9	55.1	104			
4-Chloro-3-methylphenol	170	10	200.0	0	82.6	57	115			
2-Chlorophenol	140	10	200.0	0	71.8	43.4	112			
1,4-Dichlorobenzene	57	10	100.0	0	57.0	38	95.2			
2,4-Dinitrotoluene	74	10	100.0	0	73.7	55.1	96.7			
N-Nitrosodi-n-propylamine	80	10	100.0	0	80.4	55	112			
4-Nitrophenol	96	10	200.0	0	48.0	16.6	93			
Pentachlorophenol	140	20	200.0	0	67.8	43.2	104			
Phenol	89	10	200.0	0	44.5	21.3	85.7			
Pyrene	80	10	100.0	0	79.8	64.9	105			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.4	42.6	107			
Surr: 2-Fluorophenol	85		200.0		42.7	15	74.1			
Surr: Phenol-d5	70		200.0		34.8	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		67.6	22.1	112			
Surr: Nitrobenzene-d5	71		100.0		71.2	33.2	94			
Surr: 2-Fluorobiphenyl	67		100.0		66.6	34	90.9			
Surr: 4-Terphenyl-d14	61		100.0		61.1	15	149			

Sample ID **lcsd-41498**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **41498**	RunNo: **55757**
Prep Date: **11/13/2018**	Analysis Date: **11/19/2018**	SeqNo: **1858274** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	83.3	55.1	104	5.35	34.9	
4-Chloro-3-methylphenol	160	10	200.0	0	78.6	57	115	5.00	30.2	
2-Chlorophenol	140	10	200.0	0	71.1	43.4	112	1.09	49.5	
1,4-Dichlorobenzene	58	10	100.0	0	58.5	38	95.2	2.53	43.2	
2,4-Dinitrotoluene	78	10	100.0	0	77.8	55.1	96.7	5.44	49.9	
N-Nitrosodi-n-propylamine	87	10	100.0	0	86.8	55	112	7.61	42.1	
4-Nitrophenol	100	10	200.0	0	51.2	16.6	93	6.48	31.5	
Pentachlorophenol	150	20	200.0	0	73.4	43.2	104	7.91	52.5	
Phenol	87	10	200.0	0	43.7	21.3	85.7	1.82	54.4	
Pyrene	83	10	100.0	0	83.4	64.9	105	4.34	30.7	
1,2,4-Trichlorobenzene	63	10	100.0	0	63.4	42.6	107	13.3	48.1	
Surr: 2-Fluorophenol	86		200.0		43.1	15	74.1	0	0	
Surr: Phenol-d5	63		200.0		31.6	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	150		200.0		75.5	22.1	112	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.4	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	68		100.0		67.9	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID	**lcsd-41498**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**41498**		RunNo:	**55757**				
Prep Date:	**11/13/2018**	Analysis Date:	**11/19/2018**		SeqNo:	**1858274**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	66		100.0		66.2	15	149	0	0	

Sample ID	**mb-41498**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**41498**		RunNo:	**55757**				
Prep Date:	**11/13/2018**	Analysis Date:	**11/19/2018**		SeqNo:	**1858275**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	8.8	10								J
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**

27-Dec-18

Client: Marathon

Project: 2018 4th Quarter OW Wells

Sample ID **mb-41498**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41498**	RunNo: **55757**
Prep Date: **11/13/2018**	Analysis Date: **11/19/2018**	SeqNo: **1858275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811442**
27-Dec-18

Client: Marathon
Project: 2018 4th Quarter OW Wells

Sample ID **mb-41498**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41498**	RunNo: **55757**
Prep Date: **11/13/2018**	Analysis Date: **11/19/2018**	SeqNo: **1858275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	93		200.0		46.6	15	74.1			
Surr: Phenol-d5	69		200.0		34.5	15	59.8			
Surr: 2,4,6-Tribromophenol	120		200.0		61.5	22.1	112			
Surr: Nitrobenzene-d5	66		100.0		66.0	33.2	94			
Surr: 2-Fluorobiphenyl	60		100.0		60.4	34	90.9			
Surr: 4-Terphenyl-d14	68		100.0		68.3	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811442** RcptNo: **1**

Received By: **Victoria Zellar** **11/8/2018 8:40:00 AM** Victoria Zellar

Completed By: **Ashley Gallegos** **11/8/2018 11:18:01 AM**

Reviewed By: ENM 11/8/18 labeled by DAD 11/08/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ DAD 11/08/18
8. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 21 (<2 or >12 unless noted)
Adjusted? YES
Checked by: DAD 11/08/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks: FOR METALS ANALYSIS, added APPROX. .5mL. HNO_3 to sample OW-56 (-005E) To Achieve acceptable pH. Held 24hrs. prior to Analysis. DAD 11/08/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			
2	1.3	Good	Yes			
3	0.3	Good	Yes			

Chain-of-Custody Record

Client: MARATHON

GALLUP REFINERY

Mailing Address: 92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2018 4TH QUARTER - OW WELLS

Project #:

QTLY GW SAMPLING

Project Manager:

C. JOHNSON (cheryl.a.johnson@andeavor.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.0, 3.3, 0.3 ½ Coolers

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811442	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	MAJOR CATIONS/ANIONS							Air Bubbles (Y or N)
11/7/2018	700	aqueous	FIELD BLANK	3-40ML VOAS	HCL	-001	X												
11/7/2018	700	aqueous	TRIP BLANK	3-40ML VOAS	HCL	-002	X												
11/7/2018	1010	aqueous	OW-60	Misc	Misc	-003	X	X	X	X	X	X							
11/7/2018	0934	aqueous	OW-59	Misc	Misc	-004	X	X	X	X	X	X							
11/7/2018	0905	aqueous	OW-56	Misc	Misc	-005	X	X	X	X	X	X							
11/7/2018	0842	aqueous	OW-55	Misc	Misc	-006	X	X	X	X	X	X							
11/7/2018	0815	aqueous	OW-54	Misc	Misc	-007	X	X	X	X	X	X							
11/7/2018	0940	aqueous	DUPLICATE	Misc	Misc	-008	X	X	X	X	X	X							

Date	Time	Relinquished by	Received by	Date	Time
11-7-18	1600		Victoria Ballan	11/8/18	8:40
Date	Time	Relinquished by	Received by	Date	Time

Courier #2 11/8/18 8:40

Remarks: WQCC METALS TO INCLUDE RCRA 8 METALS - MINUS URANIUM

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 30, 2018

Cheryl Johnson

Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 2018 th QTR OW Wells OrderNo.: 1811445

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/8/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 7:00:00 AM
Lab ID: 1811445-001 **Matrix:** AQUEOUS **Received Date:** 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Toluene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Ethylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Naphthalene	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 4:03:07 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 4:03:07 PM
Acetone	ND	10		µg/L	1	11/13/2018 4:03:07 PM
Bromobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Bromoform	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Bromomethane	ND	3.0		µg/L	1	11/13/2018 4:03:07 PM
2-Butanone	ND	10		µg/L	1	11/13/2018 4:03:07 PM
Carbon disulfide	ND	10		µg/L	1	11/13/2018 4:03:07 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Chlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Chloroethane	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM
Chloroform	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Chloromethane	ND	3.0		µg/L	1	11/13/2018 4:03:07 PM
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Dibromomethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 7:00:00 AM
Lab ID: 1811445-001
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
2-Hexanone	ND	10		µg/L	1	11/13/2018 4:03:07 PM
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2018 4:03:07 PM
Methylene Chloride	ND	3.0		µg/L	1	11/13/2018 4:03:07 PM
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2018 4:03:07 PM
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Styrene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2018 4:03:07 PM
Vinyl chloride	ND	1.0		µg/L	1	11/13/2018 4:03:07 PM
Xylenes, Total	ND	1.5		µg/L	1	11/13/2018 4:03:07 PM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	11/13/2018 4:03:07 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/13/2018 4:03:07 PM
Surr: Dibromofluoromethane	95.0	70-130		%Rec	1	11/13/2018 4:03:07 PM
Surr: Toluene-d8	101	70-130		%Rec	1	11/13/2018 4:03:07 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-14
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 9:50:00 AM
Lab ID: 1811445-002
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8011/504.1: EDB						Analyst: **JME**
1,2-Dibromoethane	ND	0.0095		µg/L	1	11/13/2018 7:29:10 PM
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**
Diesel Range Organics (DRO)	4.4	1.0		mg/L	1	11/13/2018 11:37:14 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/13/2018 11:37:14 AM
Surr: DNOP	119	76.7-135		%Rec	1	11/13/2018 11:37:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	33	2.5		mg/L	50	11/9/2018 2:11:53 PM
Surr: BFB	99.3	72.8-125		%Rec	50	11/9/2018 2:11:53 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**
Barium	2.2	0.020	*	mg/L	10	11/20/2018 6:51:18 PM
Cadmium	ND	0.0020		mg/L	1	11/20/2018 6:49:18 PM
Chromium	ND	0.0060		mg/L	1	11/20/2018 6:49:18 PM
Copper	ND	0.0060		mg/L	1	11/20/2018 6:49:18 PM
Iron	4.4	0.20	*	mg/L	10	11/20/2018 6:51:18 PM
Manganese	2.1	0.020	*	mg/L	10	11/20/2018 6:51:18 PM
Silver	ND	0.0050		mg/L	1	11/20/2018 6:49:18 PM
Zinc	ND	0.010		mg/L	1	11/20/2018 6:49:18 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: **pmf**
Barium	2.1	0.010	*	mg/L	5	11/19/2018 4:55:33 PM
Cadmium	ND	0.0020		mg/L	1	11/16/2018 7:44:04 PM
Chromium	ND	0.0060		mg/L	1	11/16/2018 7:44:04 PM
Copper	ND	0.0060		mg/L	1	11/16/2018 7:44:04 PM
Iron	4.6	0.10	*	mg/L	5	11/19/2018 4:55:33 PM
Manganese	2.1	0.010	*	mg/L	5	11/20/2018 4:04:59 PM
Silver	ND	0.0050		mg/L	1	11/16/2018 7:44:04 PM
Zinc	ND	0.010		mg/L	1	11/16/2018 7:44:04 PM
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**
Arsenic	0.0047	0.0010		mg/L	1	11/21/2018 1:14:34 PM
Lead	ND	0.00050		mg/L	1	11/21/2018 1:14:34 PM
Selenium	ND	0.0010		mg/L	1	11/21/2018 1:14:34 PM
Uranium	0.0029	0.0025		mg/L	5	11/27/2018 12:05:52 PM
200.8 ICPMS METALS:TOTAL						Analyst: **DBK**
Arsenic	0.0058	0.0010		mg/L	1	11/15/2018 6:58:08 PM
Lead	ND	0.00050		mg/L	1	11/15/2018 6:58:08 PM
Selenium	ND	0.0010		mg/L	1	11/15/2018 6:58:08 PM
Uranium	0.0025	0.00050		mg/L	1	11/15/2018 6:58:08 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-14
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 9:50:00 AM
Lab ID: 1811445-002
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						Analyst: **rde**
Mercury	ND	0.00020		mg/L	1	11/13/2018 10:00:09 AM
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
Benzene	13000	500		µg/L	500	11/13/2018 4:31:42 PM
Toluene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Ethylbenzene	640	50		µg/L	50	11/13/2018 5:00:13 PM
Methyl tert-butyl ether (MTBE)	600	50		µg/L	50	11/13/2018 5:00:13 PM
1,2,4-Trimethylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,3,5-Trimethylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Naphthalene	ND	100		µg/L	50	11/13/2018 5:00:13 PM
1-Methylnaphthalene	ND	200		µg/L	50	11/13/2018 5:00:13 PM
2-Methylnaphthalene	ND	200		µg/L	50	11/13/2018 5:00:13 PM
Acetone	ND	500		µg/L	50	11/13/2018 5:00:13 PM
Bromobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Bromodichloromethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Bromoform	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Bromomethane	ND	150		µg/L	50	11/13/2018 5:00:13 PM
2-Butanone	ND	500		µg/L	50	11/13/2018 5:00:13 PM
Carbon disulfide	ND	500		µg/L	50	11/13/2018 5:00:13 PM
Carbon Tetrachloride	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Chlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Chloroethane	ND	100		µg/L	50	11/13/2018 5:00:13 PM
Chloroform	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Chloromethane	ND	150		µg/L	50	11/13/2018 5:00:13 PM
2-Chlorotoluene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
4-Chlorotoluene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
cis-1,2-DCE	ND	50		µg/L	50	11/13/2018 5:00:13 PM
cis-1,3-Dichloropropene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	11/13/2018 5:00:13 PM
Dibromochloromethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Dibromomethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2-Dichlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,3-Dichlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,4-Dichlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Dichlorodifluoromethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1-Dichloroethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1-Dichloroethene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2-Dichloropropane	ND	50		µg/L	50	11/13/2018 5:00:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-14
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 9:50:00 AM
Lab ID: 1811445-002
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
1,3-Dichloropropane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
2,2-Dichloropropane	ND	100		µg/L	50	11/13/2018 5:00:13 PM
1,1-Dichloropropene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Hexachlorobutadiene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
2-Hexanone	ND	500		µg/L	50	11/13/2018 5:00:13 PM
Isopropylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
4-Isopropyltoluene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
4-Methyl-2-pentanone	ND	500		µg/L	50	11/13/2018 5:00:13 PM
Methylene Chloride	ND	150		µg/L	50	11/13/2018 5:00:13 PM
n-Butylbenzene	ND	150		µg/L	50	11/13/2018 5:00:13 PM
n-Propylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
sec-Butylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Styrene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
tert-Butylbenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	11/13/2018 5:00:13 PM
Tetrachloroethene (PCE)	ND	50		µg/L	50	11/13/2018 5:00:13 PM
trans-1,2-DCE	ND	50		µg/L	50	11/13/2018 5:00:13 PM
trans-1,3-Dichloropropene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2,3-Trichlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2,4-Trichlorobenzene	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1,1-Trichloroethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,1,2-Trichloroethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Trichloroethene (TCE)	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Trichlorofluoromethane	ND	50		µg/L	50	11/13/2018 5:00:13 PM
1,2,3-Trichloropropane	ND	100		µg/L	50	11/13/2018 5:00:13 PM
Vinyl chloride	ND	50		µg/L	50	11/13/2018 5:00:13 PM
Xylenes, Total	ND	75		µg/L	50	11/13/2018 5:00:13 PM
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	50	11/13/2018 5:00:13 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	50	11/13/2018 5:00:13 PM
Surr: Dibromofluoromethane	94.0	70-130		%Rec	50	11/13/2018 5:00:13 PM
Surr: Toluene-d8	100	70-130		%Rec	50	11/13/2018 5:00:13 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-29
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 11:05:00 AM
Lab ID: 1811445-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8011/504.1: EDB						Analyst: **JME**
1,2-Dibromoethane	ND	0.0094		µg/L	1	11/13/2018 7:58:43 PM
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/13/2018 11:59:18 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/13/2018 11:59:18 AM
Surr: DNOP	110	76.7-135		%Rec	1	11/13/2018 11:59:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	2.5	0.25		mg/L	5	11/9/2018 2:34:26 PM
Surr: BFB	93.0	72.8-125		%Rec	5	11/9/2018 2:34:26 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**
Barium	0.071	0.0020		mg/L	1	11/20/2018 6:53:14 PM
Cadmium	ND	0.0020		mg/L	1	11/20/2018 6:53:14 PM
Chromium	ND	0.0060		mg/L	1	11/20/2018 6:53:14 PM
Copper	ND	0.0060		mg/L	1	11/20/2018 6:53:14 PM
Iron	0.24	0.020		mg/L	1	11/20/2018 6:53:14 PM
Manganese	0.30	0.0020	*	mg/L	1	11/20/2018 6:53:14 PM
Silver	ND	0.0050		mg/L	1	11/20/2018 6:53:14 PM
Zinc	ND	0.010		mg/L	1	11/20/2018 6:53:14 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**
Barium	0.073	0.0020		mg/L	1	11/16/2018 7:46:06 PM
Cadmium	ND	0.0020		mg/L	1	11/16/2018 7:46:06 PM
Chromium	ND	0.0060		mg/L	1	11/16/2018 7:46:06 PM
Copper	ND	0.0060		mg/L	1	11/16/2018 7:46:06 PM
Iron	0.38	0.020	*	mg/L	1	11/16/2018 7:46:06 PM
Manganese	0.30	0.0020	*	mg/L	1	11/16/2018 7:46:06 PM
Silver	ND	0.0050		mg/L	1	11/16/2018 7:46:06 PM
Zinc	ND	0.010		mg/L	1	11/16/2018 7:46:06 PM
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**
Arsenic	ND	0.0010		mg/L	1	11/21/2018 1:17:02 PM
Lead	ND	0.00050		mg/L	1	11/21/2018 1:17:02 PM
Selenium	ND	0.0010		mg/L	1	11/21/2018 1:17:02 PM
Uranium	0.052	0.0025	*	mg/L	5	11/27/2018 11:53:47 AM
200.8 ICPMS METALS:TOTAL						Analyst: **DBK**
Arsenic	0.0014	0.0010		mg/L	1	11/15/2018 7:00:08 PM
Lead	ND	0.00050		mg/L	1	11/15/2018 7:00:08 PM
Selenium	ND	0.0010		mg/L	1	11/15/2018 7:00:08 PM
Uranium	0.048	0.0025	*	mg/L	5	11/26/2018 5:05:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-29
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 11:05:00 AM
Lab ID: 1811445-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						Analyst: **rde**
Mercury	ND	0.00020		mg/L	1	11/13/2018 10:02:26 AM
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
Benzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Toluene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Ethylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Methyl tert-butyl ether (MTBE)	3200	50		µg/L	50	11/13/2018 5:28:49 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Naphthalene	ND	10		µg/L	5	11/13/2018 5:57:24 PM
1-Methylnaphthalene	ND	20		µg/L	5	11/13/2018 5:57:24 PM
2-Methylnaphthalene	ND	20		µg/L	5	11/13/2018 5:57:24 PM
Acetone	ND	50		µg/L	5	11/13/2018 5:57:24 PM
Bromobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Bromodichloromethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Bromoform	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Bromomethane	ND	15		µg/L	5	11/13/2018 5:57:24 PM
2-Butanone	ND	50		µg/L	5	11/13/2018 5:57:24 PM
Carbon disulfide	ND	50		µg/L	5	11/13/2018 5:57:24 PM
Carbon Tetrachloride	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Chlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Chloroethane	ND	10		µg/L	5	11/13/2018 5:57:24 PM
Chloroform	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Chloromethane	ND	15		µg/L	5	11/13/2018 5:57:24 PM
2-Chlorotoluene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
4-Chlorotoluene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
cis-1,2-DCE	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/13/2018 5:57:24 PM
Dibromochloromethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Dibromomethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1-Dichloroethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1-Dichloroethene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2-Dichloropropane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-29
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 11:05:00 AM
Lab ID: 1811445-003
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
1,3-Dichloropropane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
2,2-Dichloropropane	ND	10		µg/L	5	11/13/2018 5:57:24 PM
1,1-Dichloropropene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Hexachlorobutadiene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
2-Hexanone	ND	50		µg/L	5	11/13/2018 5:57:24 PM
Isopropylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
4-Isopropyltoluene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
4-Methyl-2-pentanone	ND	50		µg/L	5	11/13/2018 5:57:24 PM
Methylene Chloride	ND	15		µg/L	5	11/13/2018 5:57:24 PM
n-Butylbenzene	ND	15		µg/L	5	11/13/2018 5:57:24 PM
n-Propylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
sec-Butylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Styrene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
tert-Butylbenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/13/2018 5:57:24 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
trans-1,2-DCE	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Trichlorofluoromethane	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
1,2,3-Trichloropropane	ND	10		µg/L	5	11/13/2018 5:57:24 PM
Vinyl chloride	ND	5.0		µg/L	5	11/13/2018 5:57:24 PM
Xylenes, Total	ND	7.5		µg/L	5	11/13/2018 5:57:24 PM
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	5	11/13/2018 5:57:24 PM
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	5	11/13/2018 5:57:24 PM
Surr: Dibromofluoromethane	96.0	70-130		%Rec	5	11/13/2018 5:57:24 PM
Surr: Toluene-d8	97.6	70-130		%Rec	5	11/13/2018 5:57:24 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-13
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 12:30:00 PM
Lab ID: 1811445-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8011/504.1: EDB						Analyst: **JME**
1,2-Dibromoethane	ND	0.0094		µg/L	1	11/13/2018 8:13:30 PM
EPA METHOD 8015M/D: DIESEL RANGE						Analyst: **lrm**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/13/2018 12:21:13 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/13/2018 12:21:13 PM
Surr: DNOP	114	76.7-135		%Rec	1	11/13/2018 12:21:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/9/2018 2:56:57 PM
Surr: BFB	94.1	72.8-125		%Rec	1	11/9/2018 2:56:57 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **pmf**
Barium	0.019	0.0020		mg/L	1	11/20/2018 6:57:25 PM
Cadmium	ND	0.0020		mg/L	1	11/20/2018 6:57:25 PM
Chromium	ND	0.0060		mg/L	1	11/20/2018 6:57:25 PM
Copper	ND	0.0060		mg/L	1	11/20/2018 6:57:25 PM
Iron	ND	0.020		mg/L	1	11/20/2018 6:57:25 PM
Manganese	0.021	0.0020		mg/L	1	11/20/2018 6:57:25 PM
Silver	ND	0.0050		mg/L	1	11/20/2018 6:57:25 PM
Zinc	0.018	0.010		mg/L	1	11/20/2018 6:57:25 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**
Barium	0.020	0.0020		mg/L	1	11/16/2018 7:48:17 PM
Cadmium	ND	0.0020		mg/L	1	11/16/2018 7:48:17 PM
Chromium	ND	0.0060		mg/L	1	11/16/2018 7:48:17 PM
Copper	ND	0.0060		mg/L	1	11/16/2018 7:48:17 PM
Iron	ND	0.020		mg/L	1	11/16/2018 7:48:17 PM
Manganese	0.020	0.0020		mg/L	1	11/16/2018 7:48:17 PM
Silver	ND	0.0050		mg/L	1	11/16/2018 7:48:17 PM
Zinc	ND	0.010		mg/L	1	11/16/2018 7:48:17 PM
EPA 200.8: DISSOLVED METALS						Analyst: **DBK**
Arsenic	ND	0.0010		mg/L	1	11/21/2018 1:19:30 PM
Lead	ND	0.00050		mg/L	1	11/21/2018 1:19:30 PM
Selenium	ND	0.0010		mg/L	1	11/21/2018 1:19:30 PM
Uranium	0.016	0.00050		mg/L	1	11/27/2018 11:56:12 AM
200.8 ICPMS METALS:TOTAL						Analyst: **DBK**
Arsenic	ND	0.0010		mg/L	1	11/15/2018 7:02:08 PM
Lead	ND	0.00050		mg/L	1	11/15/2018 7:02:08 PM
Selenium	ND	0.0010		mg/L	1	11/15/2018 7:02:08 PM
Uranium	0.014	0.00050		mg/L	1	11/15/2018 7:02:08 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-13
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 12:30:00 PM
Lab ID: 1811445-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						Analyst: **rde**
Mercury	ND	0.00020		mg/L	1	11/13/2018 10:04:45 AM
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Toluene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Ethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Methyl tert-butyl ether (MTBE)	62	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Naphthalene	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 6:25:57 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 6:25:57 PM
Acetone	ND	10		µg/L	1	11/13/2018 6:25:57 PM
Bromobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Bromoform	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Bromomethane	ND	3.0		µg/L	1	11/13/2018 6:25:57 PM
2-Butanone	ND	10		µg/L	1	11/13/2018 6:25:57 PM
Carbon disulfide	ND	10		µg/L	1	11/13/2018 6:25:57 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Chlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Chloroethane	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
Chloroform	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Chloromethane	ND	3.0		µg/L	1	11/13/2018 6:25:57 PM
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Dibromomethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-13
Project: 2018 th QTR OW Wells
Collection Date: 11/6/2018 12:30:00 PM
Lab ID: 1811445-004
Matrix: AQUEOUS
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
2-Hexanone	ND	10		µg/L	1	11/13/2018 6:25:57 PM
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2018 6:25:57 PM
Methylene Chloride	ND	3.0		µg/L	1	11/13/2018 6:25:57 PM
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2018 6:25:57 PM
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Styrene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2018 6:25:57 PM
Vinyl chloride	ND	1.0		µg/L	1	11/13/2018 6:25:57 PM
Xylenes, Total	ND	1.5		µg/L	1	11/13/2018 6:25:57 PM
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	11/13/2018 6:25:57 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	11/13/2018 6:25:57 PM
Surr: Dibromofluoromethane	93.8	70-130		%Rec	1	11/13/2018 6:25:57 PM
Surr: Toluene-d8	101	70-130		%Rec	1	11/13/2018 6:25:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 2018 th QTR OW Wells
Collection Date:
Lab ID: 1811445-005
Matrix: TRIP BLANK
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
Benzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Toluene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Ethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Naphthalene	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 6:54:29 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2018 6:54:29 PM
Acetone	ND	10		µg/L	1	11/13/2018 6:54:29 PM
Bromobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Bromoform	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Bromomethane	ND	3.0		µg/L	1	11/13/2018 6:54:29 PM
2-Butanone	ND	10		µg/L	1	11/13/2018 6:54:29 PM
Carbon disulfide	ND	10		µg/L	1	11/13/2018 6:54:29 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Chlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Chloroethane	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM
Chloroform	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Chloromethane	ND	3.0		µg/L	1	11/13/2018 6:54:29 PM
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Dibromomethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 2018 th QTR OW Wells
Collection Date:
Lab ID: 1811445-005
Matrix: TRIP BLANK
Received Date: 11/8/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: **AG**
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
2-Hexanone	ND	10		µg/L	1	11/13/2018 6:54:29 PM
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2018 6:54:29 PM
Methylene Chloride	ND	3.0		µg/L	1	11/13/2018 6:54:29 PM
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2018 6:54:29 PM
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Styrene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2018 6:54:29 PM
Vinyl chloride	ND	1.0		µg/L	1	11/13/2018 6:54:29 PM
Xylenes, Total	ND	1.5		µg/L	1	11/13/2018 6:54:29 PM
Surr: 1,2-Dichloroethane-d4	95.6	70-130		%Rec	1	11/13/2018 6:54:29 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/13/2018 6:54:29 PM
Surr: Dibromofluoromethane	91.0	70-130		%Rec	1	11/13/2018 6:54:29 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	11/13/2018 6:54:29 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B55782**	RunNo: **55782**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55782**	RunNo: **55782**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020	0.002000	0	83.0	50	150			
Cadmium	ND	0.0020	0.002000	0	94.0	50	150			
Chromium	ND	0.0060	0.006000	0	97.0	50	150			
Copper	ND	0.0060	0.006000	0	79.8	50	150			
Iron	ND	0.020	0.02000	0	92.2	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Silver	0.0052	0.0050	0.005000	0	105	50	150			
Zinc	ND	0.010	0.005000	0	115	50	150			

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B55782**	RunNo: **55782**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.48	0.0060	0.5000	0	95.1	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.49	0.020	0.5000	0	98.8	85	115			
Manganese	0.49	0.0020	0.5000	0	97.6	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**1811537-001CMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B55782**			RunNo: **55782**					
Prep Date:		Analysis Date: **11/20/2018**			SeqNo: **1860880**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	94.9	70	130			

Sample ID	**1811537-001CMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B55782**			RunNo: **55782**					
Prep Date:		Analysis Date: **11/20/2018**			SeqNo: **1860881**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	96.2	70	130	1.28	20	

Sample ID	**1811537-002CMS**	SampType: **MS**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B55782**			RunNo: **55782**					
Prep Date:		Analysis Date: **11/20/2018**			SeqNo: **1860883**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.49	0.0060	0.5000	0.009010	96.0	70	130			

Sample ID	**1811537-002CMSD**	SampType: **MSD**			TestCode: **EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID: **B55782**			RunNo: **55782**					
Prep Date:		Analysis Date: **11/20/2018**			SeqNo: **1860884**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.0060	0.5000	0.009010	97.2	70	130	1.24	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **MB-41489**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41489**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-41489**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41489**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0022	0.0020	0.002000	0	110	50	150			
Cadmium	ND	0.0020	0.002000	0	98.0	50	150			
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	ND	0.0060	0.006000	0	96.7	50	150			
Iron	0.021	0.020	0.02000	0	107	50	150			
Manganese	0.0021	0.0020	0.002000	0	107	50	150			
Silver	0.0054	0.0050	0.005000	0	107	50	150			
Zinc	ND	0.010	0.005000	0	141	50	150			

Sample ID **LCS-41489**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41489**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.5	85	115			
Iron	0.49	0.020	0.5000	0	97.9	85	115			
Manganese	0.48	0.0020	0.5000	0	97.0	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.48	0.010	0.5000	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861119** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	99.1	50	150			
Lead	ND	0.00050	0.0005000	0	98.0	50	150			
Selenium	0.0013	0.0010	0.001000	0	125	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			

Sample ID **1811473-004EMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861129** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.037	0.0010	0.02500	0.01217	99.8	70	130			
Lead	0.012	0.00050	0.01250	0.0002903	93.9	70	130			
Selenium	0.025	0.0010	0.02500	0	98.9	70	130			

Sample ID **1811473-004EMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861130** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.037	0.0010	0.02500	0.01217	99.0	70	130	0.564	20	
Lead	0.012	0.00050	0.01250	0.0002903	93.6	70	130	0.278	20	
Selenium	0.025	0.0010	0.02500	0	98.4	70	130	0.495	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**MB-B**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**B55887**	RunNo:	**55887**					
Prep Date:		Analysis Date:	**11/27/2018**	SeqNo:	**1864498**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**B55887**	RunNo:	**55887**					
Prep Date:		Analysis Date:	**11/27/2018**	SeqNo:	**1864499**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00051	0.00050	0.0005000	0	101	50	150			

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**B55887**	RunNo:	**55887**					
Prep Date:		Analysis Date:	**11/27/2018**	SeqNo:	**1864500**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**MB-41489**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41489**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855518**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41489**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41489**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855520**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			
Lead	ND	0.00050	0.0005000	0	98.7	50	150			
Selenium	ND	0.0010	0.001000	0	98.4	50	150			
Uranium	0.00052	0.00050	0.0005000	0	103	50	150			

Sample ID	**MSLCS-41489**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41489**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855522**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Lead	0.013	0.00050	0.01250	0	102	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.013	0.00050	0.01250	0	106	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**MB-41481**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**41481**	RunNo:	**55601**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1851583**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-41481**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**41481**	RunNo:	**55601**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1851584**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.5	80	120			

Sample ID	**1811505-001BMS**	SampType:	**MS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**BatchQC**	Batch ID:	**41481**	RunNo:	**55601**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1851586**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.6	75	125			

Sample ID	**1811505-001BMSD**	SampType:	**MSD**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**BatchQC**	Batch ID:	**41481**	RunNo:	**55601**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1851587**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.3	75	125	6.64	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**MB-41450**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852152**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41450**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852155**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.076	0.010	0.1000	0	75.7	70	130			

Sample ID	**LCSD-41450**	SampType:	**LCSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSS02**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852156**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.12	0.010	0.1000	0	122	70	130	46.7	20	R

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID	**LCS-41474**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**LCSW**	Batch ID:	**41474**		RunNo:	**55605**				
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**		SeqNo:	**1851933**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	88.1	70	130			
Surr: DNOP	0.51		0.5000		102	76.7	135			

Sample ID	**MB-41474**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**PBW**	Batch ID:	**41474**		RunNo:	**55605**				
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**		SeqNo:	**1851934**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.7	135			

Sample ID	**1811496-010BMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**BatchQC**	Batch ID:	**41474**		RunNo:	**55605**				
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**		SeqNo:	**1852892**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	82.8	143			
Surr: DNOP	0.55		0.5000		110	76.7	135			

Sample ID	**1811496-010BMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range**				
Client ID:	**BatchQC**	Batch ID:	**41474**		RunNo:	**55605**				
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**		SeqNo:	**1853139**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.2	82.8	143	0.863	20	
Surr: DNOP	0.54		0.5000		108	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.2	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	79.5	127			
Surr: BFB	22		20.00		108	72.8	125			

Sample ID **1811442-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	1.0	10.00	21.37	103	52.5	149			
Surr: BFB	480		400.0		119	72.8	125			

Sample ID **1811442-006AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **G55538**	RunNo: **55538**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	1.0	10.00	21.37	93.3	52.5	149	3.07	20	
Surr: BFB	490		400.0		123	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.1	70	130			
Toluene	19	1.0	20.00	0	95.7	70	130			
Chlorobenzene	19	1.0	20.00	0	96.4	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **1811484-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852411** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.5	60.5	137			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	98.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.1	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID **1811484-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852413** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	82.7	60.5	137	16.4	20	
Toluene	18	1.0	20.00	0	89.2	70	130	13.1	20	
Chlorobenzene	17	1.0	20.00	0	86.3	70	130	13.6	20	
1,1-Dichloroethene	17	1.0	20.00	0	84.6	70	130	18.2	20	
Trichloroethene (TCE)	15	1.0	20.00	0	76.4	70	130	16.2	20	
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130	0	0	
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811445**

30-Nov-18

Client: Marathon

Project: 2018 th QTR OW Wells

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1811445 RcptNo: 1

Received By: Victoria Zellar 11/8/2018 8:40:00 AM Victoria Zellar

Completed By: Ashley Gallegos 11/8/2018 11:35:04 AM

Reviewed By: JAB 11/09/18 labeled by DAD 11/09/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? NO
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: DAD 11/09/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			
2	1.3	Good	Yes			
3	0.3	Good	Yes			

Chain-of-Custody Record

Client:	MARATHON
	GALLUP REFINERY
Mailing Address:	92 Giant Crossing Road, Gallup, NM 87301
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	
☐ Standard	X Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other
☐ EDD (Type)	

Turn-Around Time: X Standard ☐ Rush

Project Name: 2018 4TH QTR (OW WELLS)

Project #: QUARTERLY SAMPLING

Project Manager: C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.3, 1.3, 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811445	Analysis Request: 8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	8015D (GRO/DRO/MRO)	8270	8011 - EDB	Air Bubbles (Y or N)
11/6/2018	700	aqueous	FIELD BLANK	3-40ML VOAs	HCL	-001	X						
11/6/2018	950	aqueous	OW-14	Misc	Misc	-002	X	X	X	X		X	
11/6/2018	1105	aqueous	OW-29	Misc	Misc	-003	X	X	X	X		X	
11/6/2018	1230	aqueous	OW-13	Misc	Misc	-004	X	X	X	X		X	
11/9/2018		aqueous	TRIP BLANK	MISC	Misc	-005	X						

Date	Time	Relinquished by	Received by	Date	Time	Remarks:
11-7-18	1100			11/9/18	8:40	
Date	Time	Relinquished by:	Received by	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 12, 2018

Cheryl Johnson
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX

RE: 4th Qtr GW Sampling OrderNo.: 1811496

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/8/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811496-001
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Acetone	1.6	0.76	10	J	µg/L	1	11/13/2018 7:22:58 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 7:22:58 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 7:22:58 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811496-001
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 7:22:58 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 7:22:58 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 7:22:58 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 7:22:58 PM	R55623
Surr: 1,2-Dichloroethane-d4	94.7	0	70-130		%Rec	1	11/13/2018 7:22:58 PM	R55623
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	11/13/2018 7:22:58 PM	R55623
Surr: Dibromofluoromethane	93.3	0	70-130		%Rec	1	11/13/2018 7:22:58 PM	R55623
Surr: Toluene-d8	97.2	0	70-130		%Rec	1	11/13/2018 7:22:58 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811496-002
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Toluene	0.20	0.17	1.0	J	µg/L	1	11/13/2018 7:51:27 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Naphthalene	0.55	0.29	2.0	J	µg/L	1	11/13/2018 7:51:27 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Acetone	1.9	0.76	10	J	µg/L	1	11/13/2018 7:51:27 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 7:51:27 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 7:51:27 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 7:51:27 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 7:00:00 AM
Lab ID: 1811496-002
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 7:51:27 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 7:51:27 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 7:51:27 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 7:51:27 PM	R55623
Surr: 1,2-Dichloroethane-d4	98.1	0	70-130		%Rec	1	11/13/2018 7:51:27 PM	R55623
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	11/13/2018 7:51:27 PM	R55623
Surr: Dibromofluoromethane	94.4	0	70-130		%Rec	1	11/13/2018 7:51:27 PM	R55623
Surr: Toluene-d8	100	0	70-130		%Rec	1	11/13/2018 7:51:27 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-50
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 1:40:00 PM
Lab ID: 1811496-003
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	11/13/2018 8:28:15 PM	41450
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 12:59:26 P	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 12:59:26 P	41474
Surr: DNOP	110	0	76.7-135		%Rec	1	11/13/2018 12:59:26 P	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/12/2018 9:34:24 AM	G55581
Surr: BFB	93.5	0	72.8-125		%Rec	1	11/12/2018 9:34:24 AM	G55581
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 11:02:02 AM	R55569
Chloride	40	2.5	2.5		mg/L	5	11/9/2018 11:02:02 AM	R55569
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/9/2018 11:02:02 AM	R55569
Bromide	0.34	0.10	0.50	J	mg/L	5	11/9/2018 11:02:02 AM	R55569
Nitrogen, Nitrate (As N)	ND	0.066	0.50		mg/L	5	11/9/2018 11:02:02 AM	R55569
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 11:02:02 AM	R55569
Sulfate	170	0.63	2.5		mg/L	5	11/9/2018 11:02:02 AM	R55569
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.050	0.00099	0.0020		mg/L	1	11/15/2018 10:00:14 P	B55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:00:14 P	B55682
Calcium	26	0.078	1.0		mg/L	1	11/15/2018 10:00:14 P	B55682
Chromium	ND	0.0013	0.0060		mg/L	1	11/15/2018 10:00:14 P	B55682
Copper	ND	0.0032	0.0060		mg/L	1	12/5/2018 2:45:05 PM	C56108
Iron	ND	0.016	0.020		mg/L	1	11/15/2018 10:00:14 P	B55682
Magnesium	4.6	0.25	1.0		mg/L	1	11/15/2018 10:00:14 P	B55682
Manganese	0.10	0.00039	0.0020	*	mg/L	1	11/15/2018 10:00:14 P	B55682
Potassium	0.53	0.11	1.0	J	mg/L	1	11/15/2018 10:00:14 P	B55682
Silver	ND	0.0018	0.0050		mg/L	1	12/5/2018 2:45:05 PM	C56108
Sodium	250	0.82	5.0		mg/L	5	11/21/2018 3:22:29 PM	A55817
Zinc	0.015	0.0021	0.010		mg/L	1	11/15/2018 10:00:14 P	B55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.069	0.0010	0.0020		mg/L	1	11/16/2018 7:50:25 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 7:50:25 PM	41493
Chromium	ND	0.0018	0.0060		mg/L	1	11/16/2018 7:50:25 PM	41493
Copper	ND	0.0041	0.0060		mg/L	1	11/16/2018 7:50:25 PM	41493
Iron	0.68	0.010	0.020	*	mg/L	1	11/16/2018 7:50:25 PM	41493
Manganese	0.12	0.0011	0.0020	*	mg/L	1	11/16/2018 7:50:25 PM	41493
Silver	ND	0.0012	0.0050		mg/L	1	11/16/2018 7:50:25 PM	41493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-50
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 1:40:00 PM
Lab ID: 1811496-003
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Zinc	ND	0.0033	0.010		mg/L	1	11/16/2018 7:50:25 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0018	0.00042	0.0010		mg/L	1	11/21/2018 2:08:06 PM	B55814
Lead	ND	0.00017	0.00050		mg/L	1	11/21/2018 2:08:06 PM	B55814
Selenium	ND	0.00076	0.0010		mg/L	1	11/21/2018 2:08:06 PM	B55814
Uranium	0.012	0.000096	0.00050		mg/L	1	11/27/2018 12:18:19 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	11/15/2018 7:10:08 PM	41493
Lead	0.00037	0.00023	0.00050	J	mg/L	1	11/15/2018 7:10:08 PM	41493
Selenium	ND	0.00098	0.0010		mg/L	1	11/15/2018 7:10:08 PM	41493
Uranium	0.011	0.000068	0.00050		mg/L	1	11/15/2018 7:10:08 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000090	0.000038	0.00020	J	mg/L	1	11/21/2018 4:46:11 PM	41679
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Methyl tert-butyl ether (MTBE)	10	0.46	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2-Dichloroethane (EDC)	0.43	0.19	1.0	J	µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Acetone	2.1	0.76	10	J	µg/L	1	11/13/2018 8:19:51 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 8:19:51 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 8:19:51 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 8:19:51 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-50
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 1:40:00 PM
Lab ID: 1811496-003
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 8:19:51 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 8:19:51 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-50
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 1:40:00 PM
Lab ID: 1811496-003
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 8:19:51 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 8:19:51 PM	R55623
Surr: 1,2-Dichloroethane-d4	94.9	0	70-130		%Rec	1	11/13/2018 8:19:51 PM	R55623
Surr: 4-Bromofluorobenzene	97.7	0	70-130		%Rec	1	11/13/2018 8:19:51 PM	R55623
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	1	11/13/2018 8:19:51 PM	R55623
Surr: Toluene-d8	96.8	0	70-130		%Rec	1	11/13/2018 8:19:51 PM	R55623
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	1200	5.0	5.0		µmhos/c	1	11/12/2018 12:06:24 P	R55578
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	8.29			H	pH units	1	11/12/2018 12:06:24 P	R55578

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-52
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 2:35:00 PM
Lab ID: 1811496-004
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	11/13/2018 8:43:03 PM	41450
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 1:44:39 PM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 1:44:39 PM	41474
Surr: DNOP	109	0	76.7-135		%Rec	1	11/13/2018 1:44:39 PM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/12/2018 9:57:08 AM	G55581
Surr: BFB	94.0	0	72.8-125		%Rec	1	11/12/2018 9:57:08 AM	G55581
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.53	0.50	0.50		mg/L	5	11/9/2018 11:27:45 AM	R55569
Chloride	29	2.5	2.5		mg/L	5	11/9/2018 11:27:45 AM	R55569
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/9/2018 11:27:45 AM	R55569
Bromide	0.22	0.10	0.50	J	mg/L	5	11/9/2018 11:27:45 AM	R55569
Nitrogen, Nitrate (As N)	ND	0.066	0.50		mg/L	5	11/9/2018 11:27:45 AM	R55569
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 11:27:45 AM	R55569
Sulfate	150	0.63	2.5		mg/L	5	11/9/2018 11:27:45 AM	R55569
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.030	0.00099	0.0020		mg/L	1	11/15/2018 10:04:21 P	B55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:04:21 P	B55682
Calcium	4.5	0.078	1.0		mg/L	1	11/15/2018 10:04:21 P	B55682
Chromium	ND	0.0013	0.0060		mg/L	1	11/15/2018 10:04:21 P	B55682
Copper	ND	0.0032	0.0060		mg/L	1	12/5/2018 2:47:22 PM	C56108
Iron	0.048	0.016	0.020		mg/L	1	11/15/2018 10:04:21 P	B55682
Magnesium	0.65	0.25	1.0	J	mg/L	1	11/15/2018 10:04:21 P	B55682
Manganese	0.024	0.00039	0.0020		mg/L	1	11/15/2018 10:04:21 P	B55682
Potassium	1.3	0.11	1.0		mg/L	1	11/15/2018 10:04:21 P	B55682
Silver	ND	0.0018	0.0050		mg/L	1	12/5/2018 2:47:22 PM	C56108
Sodium	230	0.82	5.0		mg/L	5	11/21/2018 3:24:30 PM	A55817
Zinc	0.016	0.0021	0.010		mg/L	1	11/15/2018 10:04:21 P	B55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.037	0.0010	0.0020		mg/L	1	11/16/2018 7:52:23 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 7:52:23 PM	41493
Chromium	ND	0.0018	0.0060		mg/L	1	11/16/2018 7:52:23 PM	41493
Copper	ND	0.0041	0.0060		mg/L	1	11/16/2018 7:52:23 PM	41493
Iron	0.60	0.010	0.020	*	mg/L	1	11/16/2018 7:52:23 PM	41493
Manganese	0.034	0.0011	0.0020		mg/L	1	11/16/2018 7:52:23 PM	41493
Silver	ND	0.0012	0.0050		mg/L	1	11/16/2018 7:52:23 PM	41493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-52
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 2:35:00 PM
Lab ID: 1811496-004
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Zinc	0.0035	0.0033	0.010	J	mg/L	1	11/16/2018 7:52:23 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00059	0.00042	0.0010	J	mg/L	1	11/21/2018 2:10:34 PM	B55814
Lead	ND	0.00017	0.00050		mg/L	1	11/21/2018 2:10:34 PM	B55814
Selenium	ND	0.00076	0.0010		mg/L	1	11/21/2018 2:10:34 PM	B55814
Uranium	0.010	0.000096	0.00050		mg/L	1	11/27/2018 12:30:23 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00078	0.00041	0.0010	J	mg/L	1	11/15/2018 7:12:08 PM	41493
Lead	0.00024	0.00023	0.00050	J	mg/L	1	11/15/2018 7:12:08 PM	41493
Selenium	ND	0.00098	0.0010		mg/L	1	11/15/2018 7:12:08 PM	41493
Uranium	0.0092	0.000068	0.00050		mg/L	1	11/15/2018 7:12:08 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000084	0.000038	0.00020	J	mg/L	1	11/21/2018 4:48:24 PM	41679
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Methyl tert-butyl ether (MTBE)	1.5	0.46	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2-Dichloroethane (EDC)	0.42	0.19	1.0	J	µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Acetone	ND	0.76	10		µg/L	1	11/13/2018 8:48:12 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 8:48:12 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 8:48:12 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 8:48:12 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-52
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 2:35:00 PM
Lab ID: 1811496-004
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 8:48:12 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 8:48:12 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-52
Project: 4th Qtr GW Sampling
Collection Date: 11/7/2018 2:35:00 PM
Lab ID: 1811496-004
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 8:48:12 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 8:48:12 PM	R55623
Surr: 1,2-Dichloroethane-d4	97.8	0	70-130		%Rec	1	11/13/2018 8:48:12 PM	R55623
Surr: 4-Bromofluorobenzene	99.3	0	70-130		%Rec	1	11/13/2018 8:48:12 PM	R55623
Surr: Dibromofluoromethane	92.1	0	70-130		%Rec	1	11/13/2018 8:48:12 PM	R55623
Surr: Toluene-d8	95.4	0	70-130		%Rec	1	11/13/2018 8:48:12 PM	R55623
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JRR**	
Conductivity	1000	5.0	5.0		µmhos/c	1	11/12/2018 12:10:30 P	R55578
SM4500-H+B / 9040C: PH							Analyst: **JRR**	
pH	8.35			H	pH units	1	11/12/2018 12:10:30 P	R55578

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 7:00:00 AM
Lab ID: 1811496-005 **Matrix:** AQUEOUS **Received Date:** 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Acetone	2.3	0.76	10	J	µg/L	1	11/13/2018 9:16:33 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 9:16:33 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 9:16:33 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: TRIP BLANK
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 7:00:00 AM
Lab ID: 1811496-005 **Matrix:** AQUEOUS **Received Date:** 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 9:16:33 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 9:16:33 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 9:16:33 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 9:16:33 PM	R55623
Surr: 1,2-Dichloroethane-d4	95.6	0	70-130		%Rec	1	11/13/2018 9:16:33 PM	R55623
Surr: 4-Bromofluorobenzene	98.8	0	70-130		%Rec	1	11/13/2018 9:16:33 PM	R55623
Surr: Dibromofluoromethane	90.8	0	70-130		%Rec	1	11/13/2018 9:16:33 PM	R55623
Surr: Toluene-d8	97.4	0	70-130		%Rec	1	11/13/2018 9:16:33 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 7:00:00 AM
Lab ID: 1811496-006
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Toluene	0.20	0.17	1.0	J	µg/L	1	11/13/2018 9:44:52 PM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Naphthalene	0.55	0.29	2.0	J	µg/L	1	11/13/2018 9:44:52 PM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Acetone	2.5	0.76	10	J	µg/L	1	11/13/2018 9:44:52 PM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/13/2018 9:44:52 PM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/13/2018 9:44:52 PM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/13/2018 9:44:52 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Field Blank
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 7:00:00 AM
Lab ID: 1811496-006
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/13/2018 9:44:52 PM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/13/2018 9:44:52 PM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/13/2018 9:44:52 PM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/13/2018 9:44:52 PM	R55623
Surr: 1,2-Dichloroethane-d4	93.9	0	70-130		%Rec	1	11/13/2018 9:44:52 PM	R55623
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	11/13/2018 9:44:52 PM	R55623
Surr: Dibromofluoromethane	91.0	0	70-130		%Rec	1	11/13/2018 9:44:52 PM	R55623
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	11/13/2018 9:44:52 PM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1 to EP2
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 8:30:00 AM
Lab ID: 1811496-007
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	14	0.63	1.0		mg/L	1	11/13/2018 2:06:45 PM	41474
Motor Oil Range Organics (MRO)	5.4	5.0	5.0		mg/L	1	11/13/2018 2:06:45 PM	41474
Surr: DNOP	130	0	76.7-135		%Rec	1	11/13/2018 2:06:45 PM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.14	0.12	0.25	JD	mg/L	5	11/13/2018 9:35:17 AM	G55615
Surr: BFB	96.3	0	72.8-125	D	%Rec	5	11/13/2018 9:35:17 AM	G55615
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.13	0.00099	0.0020		mg/L	1	11/15/2018 10:16:21 P	A55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:16:21 P	A55682
Chromium	0.0042	0.0013	0.0060	J	mg/L	1	11/15/2018 10:16:21 P	A55682
Copper	ND	0.0032	0.0060		mg/L	1	11/15/2018 10:16:21 P	A55682
Iron	0.49	0.016	0.020	*	mg/L	1	11/15/2018 10:16:21 P	A55682
Manganese	0.20	0.00039	0.0020	*	mg/L	1	11/15/2018 10:16:21 P	A55682
Silver	ND	0.0018	0.0050		mg/L	1	11/15/2018 10:16:21 P	A55682
Zinc	0.040	0.0021	0.010		mg/L	1	11/15/2018 10:16:21 P	A55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.18	0.0010	0.0020		mg/L	1	11/16/2018 7:54:20 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 7:54:20 PM	41493
Chromium	0.0056	0.0018	0.0060	J	mg/L	1	11/16/2018 7:54:20 PM	41493
Copper	0.0074	0.0041	0.0060		mg/L	1	11/16/2018 7:54:20 PM	41493
Iron	1.1	0.051	0.10	*	mg/L	5	11/19/2018 5:24:24 PM	41493
Manganese	0.21	0.0011	0.0020	*	mg/L	1	11/16/2018 7:54:20 PM	41493
Silver	ND	0.0012	0.0050		mg/L	1	11/16/2018 7:54:20 PM	41493
Zinc	0.051	0.0033	0.010		mg/L	1	11/16/2018 7:54:20 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.012	0.00042	0.0010	*	mg/L	1	11/21/2018 2:13:02 PM	B55814
Lead	ND	0.00087	0.0025		mg/L	5	11/27/2018 12:20:44 P	B55887
Selenium	0.013	0.00076	0.0010		mg/L	1	11/21/2018 2:13:02 PM	B55814
Uranium	0.0040	0.00048	0.0025		mg/L	5	11/27/2018 12:20:44 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.015	0.00041	0.0010	*	mg/L	1	11/26/2018 5:07:02 PM	41493
Lead	0.0012	0.00023	0.00050		mg/L	1	11/15/2018 7:14:08 PM	41493
Selenium	0.0097	0.00098	0.0010		mg/L	1	11/26/2018 5:07:02 PM	41493
Uranium	0.0056	0.000068	0.00050		mg/L	1	11/15/2018 7:14:08 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.00049	0.000038	0.00020		mg/L	1	11/21/2018 4:50:37 PM	41679

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1 to EP2
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 8:30:00 AM
Lab ID: 1811496-007
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM5210B: BOD							Analyst: **SMS**	
Biochemical Oxygen Demand	>2697.60	2.0	2.0		mg/L	1	11/14/2018 5:42:00 PM	41443
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	1.3	0.87	5.0	J	µg/L	5	11/14/2018 4:18:41 PM	A55650
Toluene	1.1	0.84	5.0	J	µg/L	5	11/14/2018 4:18:41 PM	A55650
Ethylbenzene	ND	1.1	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Methyl tert-butyl ether (MTBE)	ND	2.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2-Dichloroethane (EDC)	ND	0.95	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Naphthalene	ND	1.4	10		µg/L	5	11/14/2018 4:18:41 PM	A55650
1-Methylnaphthalene	ND	1.7	20		µg/L	5	11/14/2018 4:18:41 PM	A55650
2-Methylnaphthalene	ND	1.7	20		µg/L	5	11/14/2018 4:18:41 PM	A55650
Acetone	ND	3.8	50		µg/L	5	11/14/2018 4:18:41 PM	A55650
Bromobenzene	ND	1.6	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Bromodichloromethane	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Bromoform	ND	1.6	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Bromomethane	1.9	1.4	15	J	µg/L	5	11/14/2018 4:18:41 PM	A55650
2-Butanone	920	71	500		µg/L	50	11/15/2018 10:44:01 A	R55666
Carbon disulfide	ND	1.9	50		µg/L	5	11/14/2018 4:18:41 PM	A55650
Carbon Tetrachloride	ND	0.69	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Chlorobenzene	ND	1.5	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Chloroethane	ND	0.82	10		µg/L	5	11/14/2018 4:18:41 PM	A55650
Chloroform	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Chloromethane	ND	1.6	15		µg/L	5	11/14/2018 4:18:41 PM	A55650
2-Chlorotoluene	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
4-Chlorotoluene	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	11/14/2018 4:18:41 PM	A55650
Dibromochloromethane	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Dibromomethane	ND	1.6	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,4-Dichlorobenzene	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,1-Dichloroethane	ND	0.88	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650
1,2-Dichloropropane	ND	0.83	5.0		µg/L	5	11/14/2018 4:18:41 PM	A55650

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: STP1 to EP2
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 8:30:00 AM
Lab ID: 1811496-007
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
2,2-Dichloropropane	ND	1.2	10		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Hexachlorobutadiene	ND	2.0	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
2-Hexanone	ND	4.5	50		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Isopropylbenzene	ND	1.1	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Methylene Chloride	ND	1.0	15		µg/L	5	11/14/2018 4:18:41 PM	A5565C
n-Butylbenzene	ND	1.2	15		µg/L	5	11/14/2018 4:18:41 PM	A5565C
n-Propylbenzene	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Styrene	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
trans-1,2-DCE	ND	0.91	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,1,1-Trichloroethane	ND	0.82	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Trichlorofluoromethane	ND	0.72	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Vinyl chloride	ND	0.61	5.0		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Xylenes, Total	ND	3.2	7.5		µg/L	5	11/14/2018 4:18:41 PM	A5565C
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	5	11/14/2018 4:18:41 PM	A5565C
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	5	11/14/2018 4:18:41 PM	A5565C
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	5	11/14/2018 4:18:41 PM	A5565C
Surr: Toluene-d8	99.3	0	70-130		%Rec	5	11/14/2018 4:18:41 PM	A5565C
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	3220	100	100	*D	mg/L	1	11/16/2018 9:11:00 AM	41523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-01
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 9:33:00 AM
Lab ID: 1811496-008
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	11/13/2018 8:57:46 PM	41450
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 2:28:39 PM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 2:28:39 PM	41474
Surr: DNOP	114	0	76.7-135		%Rec	1	11/13/2018 2:28:39 PM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/12/2018 11:51:16 A	G55581
Surr: BFB	95.6	0	72.8-125		%Rec	1	11/12/2018 11:51:16 A	G55581
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 12:19:11 PM	R55569
Chloride	110	10	10		mg/L	20	11/9/2018 12:32:03 PM	R55569
Nitrogen, Nitrite (As N)	0.071	0.025	0.50	J	mg/L	5	11/9/2018 12:19:11 PM	R55569
Bromide	0.31	0.10	0.50	J	mg/L	5	11/9/2018 12:19:11 PM	R55569
Nitrogen, Nitrate (As N)	0.34	0.066	0.50	J	mg/L	5	11/9/2018 12:19:11 PM	R55569
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 12:19:11 PM	R55569
Sulfate	170	0.63	2.5		mg/L	5	11/9/2018 12:19:11 PM	R55569
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.038	0.00099	0.0020		mg/L	1	11/15/2018 10:20:33 P	B55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:20:33 P	B55682
Calcium	2.1	0.078	1.0		mg/L	1	11/15/2018 10:20:33 P	B55682
Chromium	ND	0.0013	0.0060		mg/L	1	11/15/2018 10:20:33 P	B55682
Copper	ND	0.0032	0.0060		mg/L	1	12/5/2018 2:49:40 PM	C56108
Iron	ND	0.016	0.020		mg/L	1	11/15/2018 10:20:33 P	B55682
Magnesium	ND	0.25	1.0		mg/L	1	11/15/2018 10:20:33 P	B55682
Manganese	0.0048	0.00039	0.0020		mg/L	1	11/15/2018 10:20:33 P	B55682
Potassium	0.91	0.11	1.0	J	mg/L	1	11/15/2018 10:20:33 P	B55682
Silver	ND	0.0018	0.0050		mg/L	1	12/5/2018 2:49:40 PM	C56108
Sodium	330	0.82	5.0		mg/L	5	11/21/2018 3:26:31 PM	A55817
Zinc	0.0087	0.0021	0.010	J	mg/L	1	11/15/2018 10:20:33 P	B55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.043	0.0010	0.0020		mg/L	1	11/16/2018 7:56:18 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 7:56:18 PM	41493
Chromium	0.0023	0.0018	0.0060	J	mg/L	1	11/16/2018 7:56:18 PM	41493
Copper	ND	0.0041	0.0060		mg/L	1	11/16/2018 7:56:18 PM	41493
Iron	0.31	0.010	0.020	*	mg/L	1	11/16/2018 7:56:18 PM	41493
Manganese	0.020	0.0011	0.0020		mg/L	1	11/16/2018 7:56:18 PM	41493
Silver	ND	0.0012	0.0050		mg/L	1	11/16/2018 7:56:18 PM	41493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-01
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 9:33:00 AM
Lab ID: 1811496-008
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Zinc	0.0038	0.0033	0.010	J	mg/L	1	11/16/2018 7:56:18 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00064	0.00042	0.0010	J	mg/L	1	11/21/2018 2:15:30 PM	B55814
Lead	ND	0.00017	0.00050		mg/L	1	11/21/2018 2:15:30 PM	B55814
Selenium	0.0024	0.00076	0.0010		mg/L	1	11/21/2018 2:15:30 PM	B55814
Uranium	0.035	0.00048	0.0025	*	mg/L	5	11/27/2018 12:23:09 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.00078	0.00041	0.0010	J	mg/L	1	11/15/2018 7:20:11 PM	41493
Lead	0.00034	0.00023	0.00050	J	mg/L	1	11/15/2018 7:20:11 PM	41493
Selenium	0.0028	0.00098	0.0010		mg/L	1	11/15/2018 7:20:11 PM	41493
Uranium	0.031	0.00034	0.0025	*	mg/L	5	11/26/2018 5:08:58 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000089	0.000038	0.00020	J	mg/L	1	11/21/2018 4:52:51 PM	41679
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	0.58	0.17	1.0	J	µg/L	1	11/14/2018 12:34:11 A	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Ethylbenzene	0.23	0.22	1.0	J	µg/L	1	11/14/2018 12:34:11 A	R55623
Methyl tert-butyl ether (MTBE)	1.8	0.46	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/14/2018 12:34:11 A	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Acetone	ND	0.76	10		µg/L	1	11/14/2018 12:34:11 A	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/14/2018 12:34:11 A	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/14/2018 12:34:11 A	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/14/2018 12:34:11 A	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/14/2018 12:34:11 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-01
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 9:33:00 AM
Lab ID: 1811496-008
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/14/2018 12:34:11 A	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/14/2018 12:34:11 A	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/14/2018 12:34:11 A	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/14/2018 12:34:11 A	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-01
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 9:33:00 AM
Lab ID: 1811496-008
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/14/2018 12:34:11 A	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/14/2018 12:34:11 A	R55623
Surr: 1,2-Dichloroethane-d4	92.9	0	70-130		%Rec	1	11/14/2018 12:34:11 A	R55623
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	11/14/2018 12:34:11 A	R55623
Surr: Dibromofluoromethane	91.4	0	70-130		%Rec	1	11/14/2018 12:34:11 A	R55623
Surr: Toluene-d8	96.2	0	70-130		%Rec	1	11/14/2018 12:34:11 A	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-10
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 11:00:00 AM
Lab ID: 1811496-009
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	11/13/2018 9:12:27 PM	41450
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 2:50:40 PM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 2:50:40 PM	41474
Surr: DNOP	110	0	76.7-135		%Rec	1	11/13/2018 2:50:40 PM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/12/2018 12:13:57 P	G55581
Surr: BFB	97.8	0	72.8-125		%Rec	1	11/12/2018 12:13:57 P	G55581
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 12:44:55 PM	R55569
Chloride	860	50	50		mg/L	100	11/12/2018 5:03:27 PM	R55597
Nitrogen, Nitrite (As N)	0.23	0.025	0.50	J	mg/L	5	11/9/2018 12:44:55 PM	R55569
Bromide	1.0	0.10	0.50		mg/L	5	11/9/2018 12:44:55 PM	R55569
Nitrogen, Nitrate (As N)	0.94	0.066	0.50		mg/L	5	11/9/2018 12:44:55 PM	R55569
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 12:44:55 PM	R55569
Sulfate	220	2.5	10		mg/L	20	11/9/2018 12:57:47 PM	R55569
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.053	0.00099	0.0020		mg/L	1	11/15/2018 10:24:33 P	B55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:24:33 P	B55682
Calcium	77	0.078	1.0		mg/L	1	11/15/2018 10:24:33 P	B55682
Chromium	ND	0.0013	0.0060		mg/L	1	11/15/2018 10:24:33 P	B55682
Copper	ND	0.0032	0.0060		mg/L	1	12/5/2018 2:51:48 PM	C56108
Iron	ND	0.016	0.020		mg/L	1	11/15/2018 10:24:33 P	B55682
Magnesium	14	0.25	1.0		mg/L	1	11/15/2018 10:24:33 P	B55682
Manganese	0.061	0.00039	0.0020	*	mg/L	1	11/15/2018 10:24:33 P	B55682
Potassium	1.5	0.11	1.0		mg/L	1	11/15/2018 10:24:33 P	B55682
Silver	0.0023	0.0018	0.0050	J	mg/L	1	12/5/2018 2:51:48 PM	C56108
Sodium	670	1.6	10		mg/L	10	12/5/2018 3:01:20 PM	C56108
Zinc	0.015	0.0021	0.010		mg/L	1	11/15/2018 10:24:33 P	B55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.053	0.0010	0.0020		mg/L	1	11/16/2018 7:58:22 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 7:58:22 PM	41493
Chromium	ND	0.0018	0.0060		mg/L	1	11/16/2018 7:58:22 PM	41493
Copper	ND	0.0041	0.0060		mg/L	1	11/16/2018 7:58:22 PM	41493
Iron	0.028	0.010	0.020		mg/L	1	11/16/2018 7:58:22 PM	41493
Manganese	0.064	0.0011	0.0020	*	mg/L	1	11/16/2018 7:58:22 PM	41493
Silver	0.0026	0.0012	0.0050	J	mg/L	1	11/16/2018 7:58:22 PM	41493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-10
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 11:00:00 AM
Lab ID: 1811496-009
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Zinc	ND	0.0033	0.010		mg/L	1	11/16/2018 7:58:22 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00083	0.00042	0.0010	J	mg/L	1	11/21/2018 2:17:58 PM	B55814
Lead	ND	0.00017	0.00050		mg/L	1	11/21/2018 2:17:58 PM	B55814
Selenium	0.010	0.00076	0.0010		mg/L	1	11/21/2018 2:17:58 PM	B55814
Uranium	0.053	0.00048	0.0025	*	mg/L	5	11/27/2018 12:25:33 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	11/15/2018 7:22:11 PM	41493
Lead	ND	0.00023	0.00050		mg/L	1	11/15/2018 7:22:11 PM	41493
Selenium	0.011	0.00098	0.0010		mg/L	1	11/15/2018 7:22:11 PM	41493
Uranium	0.048	0.00034	0.0025	*	mg/L	5	11/26/2018 5:10:55 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000079	0.000038	0.00020	J	mg/L	1	11/21/2018 4:55:05 PM	41679
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Methyl tert-butyl ether (MTBE)	15	0.46	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2-Dichloroethane (EDC)	0.63	0.19	1.0	J	µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Acetone	ND	0.76	10		µg/L	1	11/14/2018 1:02:18 AM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/14/2018 1:02:18 AM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/14/2018 1:02:18 AM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/14/2018 1:02:18 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-10
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 11:00:00 AM
Lab ID: 1811496-009
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1-Dichloroethane	1.2	0.18	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1-Dichloroethene	0.98	0.12	1.0	J	µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/14/2018 1:02:18 AM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/14/2018 1:02:18 AM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: OW-10
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018 11:00:00 AM
Lab ID: 1811496-009
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/14/2018 1:02:18 AM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/14/2018 1:02:18 AM	R55623
Surr: 1,2-Dichloroethane-d4	94.3	0	70-130		%Rec	1	11/14/2018 1:02:18 AM	R55623
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	11/14/2018 1:02:18 AM	R55623
Surr: Dibromofluoromethane	90.5	0	70-130		%Rec	1	11/14/2018 1:02:18 AM	R55623
Surr: Toluene-d8	97.8	0	70-130		%Rec	1	11/14/2018 1:02:18 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018
Lab ID: 1811496-010
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0096		µg/L	1	11/13/2018 9:27:11 PM	41450
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/13/2018 3:12:23 PM	41474
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/13/2018 3:12:23 PM	41474
Surr: DNOP	111	0	76.7-135		%Rec	1	11/13/2018 3:12:23 PM	41474
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/12/2018 12:36:45 P	G55581
Surr: BFB	98.6	0	72.8-125		%Rec	1	11/12/2018 12:36:45 P	G55581
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/9/2018 1:10:39 PM	R55569
Chloride	730	25	25		mg/L	50	11/12/2018 5:16:19 PM	R55597
Nitrogen, Nitrite (As N)	0.16	0.025	0.50	J	mg/L	5	11/9/2018 1:10:39 PM	R55569
Bromide	1.0	0.10	0.50		mg/L	5	11/9/2018 1:10:39 PM	R55569
Nitrogen, Nitrate (As N)	1.0	0.066	0.50		mg/L	5	11/9/2018 1:10:39 PM	R55569
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/9/2018 1:10:39 PM	R55569
Sulfate	210	2.5	10		mg/L	20	11/9/2018 1:23:30 PM	R55569
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **pmf**	
Barium	0.052	0.00099	0.0020		mg/L	1	11/15/2018 10:28:54 P	B55682
Cadmium	ND	0.0010	0.0020		mg/L	1	11/15/2018 10:28:54 P	B55682
Calcium	77	0.078	1.0		mg/L	1	11/15/2018 10:28:54 P	B55682
Chromium	ND	0.0013	0.0060		mg/L	1	11/15/2018 10:28:54 P	B55682
Copper	ND	0.0032	0.0060		mg/L	1	12/5/2018 3:03:37 PM	C56108
Iron	ND	0.016	0.020		mg/L	1	11/15/2018 10:28:54 P	B55682
Magnesium	13	0.25	1.0		mg/L	1	11/15/2018 10:28:54 P	B55682
Manganese	0.060	0.00039	0.0020	*	mg/L	1	11/15/2018 10:28:54 P	B55682
Potassium	1.4	0.11	1.0		mg/L	1	11/15/2018 10:28:54 P	B55682
Silver	0.0021	0.0018	0.0050	J	mg/L	1	12/5/2018 3:03:37 PM	C56108
Sodium	620	1.6	10		mg/L	10	11/21/2018 3:30:38 PM	A55817
Zinc	0.013	0.0021	0.010		mg/L	1	11/15/2018 10:28:54 P	B55682
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Barium	0.053	0.0010	0.0020		mg/L	1	11/16/2018 8:00:38 PM	41493
Cadmium	ND	0.00058	0.0020		mg/L	1	11/16/2018 8:00:38 PM	41493
Chromium	ND	0.0018	0.0060		mg/L	1	11/16/2018 8:00:38 PM	41493
Copper	ND	0.0041	0.0060		mg/L	1	11/16/2018 8:00:38 PM	41493
Iron	0.036	0.010	0.020		mg/L	1	11/16/2018 8:00:38 PM	41493
Manganese	0.062	0.0011	0.0020	*	mg/L	1	11/16/2018 8:00:38 PM	41493
Silver	0.0026	0.0012	0.0050	J	mg/L	1	11/16/2018 8:00:38 PM	41493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018
Lab ID: 1811496-010
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**	
Zinc	ND	0.0033	0.010		mg/L	1	11/16/2018 8:00:38 PM	41493
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00083	0.00042	0.0010	J	mg/L	1	11/21/2018 2:20:26 PM	B55814
Lead	ND	0.00017	0.00050		mg/L	1	11/21/2018 2:20:26 PM	B55814
Selenium	0.010	0.00076	0.0010		mg/L	1	11/21/2018 2:20:26 PM	B55814
Uranium	0.053	0.00048	0.0025	*	mg/L	5	11/27/2018 12:27:58 P	B55887
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0016	0.00041	0.0010		mg/L	1	11/15/2018 7:24:11 PM	41493
Lead	ND	0.00023	0.00050		mg/L	1	11/15/2018 7:24:11 PM	41493
Selenium	0.011	0.00098	0.0010		mg/L	1	11/15/2018 7:24:11 PM	41493
Uranium	0.047	0.00034	0.0025	*	mg/L	5	11/26/2018 5:12:52 PM	41493
EPA METHOD 245.1: MERCURY							Analyst: **rde**	
Mercury	0.000068	0.000038	0.00020	J	mg/L	1	11/26/2018 4:47:59 PM	41714
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Toluene	ND	0.17	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Methyl tert-butyl ether (MTBE)	15	0.46	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2-Dichloroethane (EDC)	0.61	0.19	1.0	J	µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Naphthalene	ND	0.29	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Acetone	ND	0.76	10		µg/L	1	11/14/2018 1:30:25 AM	R55623
Bromobenzene	ND	0.32	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Bromoform	ND	0.32	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Bromomethane	ND	0.27	3.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
2-Butanone	ND	1.4	10		µg/L	1	11/14/2018 1:30:25 AM	R55623
Carbon disulfide	ND	0.39	10		µg/L	1	11/14/2018 1:30:25 AM	R55623
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Chloroethane	ND	0.16	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Chloroform	ND	0.24	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Chloromethane	ND	0.32	3.0		µg/L	1	11/14/2018 1:30:25 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018
Lab ID: 1811496-010
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Dibromomethane	ND	0.32	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1-Dichloroethane	1.2	0.18	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1-Dichloroethene	0.91	0.12	1.0	J	µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
2-Hexanone	ND	0.91	10		µg/L	1	11/14/2018 1:30:25 AM	R55623
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/14/2018 1:30:25 AM	R55623
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Styrene	ND	0.25	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Client Sample ID: Duplicate
Project: 4th Qtr GW Sampling
Collection Date: 11/8/2018
Lab ID: 1811496-010
Matrix: AQUEOUS
Received Date: 11/8/2018 3:50:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/14/2018 1:30:25 AM	R55623
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/14/2018 1:30:25 AM	R55623
Surr: 1,2-Dichloroethane-d4	91.5	0	70-130		%Rec	1	11/14/2018 1:30:25 AM	R55623
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/14/2018 1:30:25 AM	R55623
Surr: Dibromofluoromethane	92.5	0	70-130		%Rec	1	11/14/2018 1:30:25 AM	R55623
Surr: Toluene-d8	98.3	0	70-130		%Rec	1	11/14/2018 1:30:25 AM	R55623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	8080		100	10	11/14/2018 14:36	WG1195930

Method Blank (MB)

(MB) R3359812-1 11/14/18 14:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1038334-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1038334-03 11/14/18 14:33 • (DUP) R3359812-3 11/14/18 14:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	1180	1170	5	0.868		20

L1043765-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1043765-04 11/14/18 14:38 • (DUP) R3359812-6 11/14/18 14:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3359812-2 11/14/18 14:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	237	107	90.0-110	

L1043765-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043765-01 11/14/18 14:37 • (MS) R3359812-4 11/14/18 14:37 • (MSD) R3359812-5 11/14/18 14:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	455	468	114	117	1	80.0-120			2.85	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	97.5	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	112	50	150			
Chromium	0.0062	0.0060	0.006000	0	104	50	150			
Copper	0.0067	0.0060	0.006000	0	112	50	150			
Iron	0.025	0.020	0.02000	0	123	50	150			
Manganese	0.0022	0.0020	0.002000	0	109	50	150			
Silver	0.0049	0.0050	0.005000	0	97.4	50	150			J
Zinc	0.0069	0.010	0.005000	0	138	50	150			J

Sample ID **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855898** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.9	85	115			
Chromium	0.49	0.0060	0.5000	0	97.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.1	85	115			
Iron	0.50	0.020	0.5000	0	99.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.099	0.0050	0.1000	0	99.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855980** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855981** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	98.0	50	150			J
Cadmium	0.0027	0.0020	0.002000	0	134	50	150			
Calcium	0.53	1.0	0.5000	0	105	50	150			J
Chromium	0.0057	0.0060	0.006000	0	94.3	50	150			J
Iron	0.022	0.020	0.02000	0	109	50	150			
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Potassium	0.37	1.0	0.5000	0	74.2	50	150			J
Zinc	0.0058	0.010	0.005000	0	115	50	150			J

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B55682**	RunNo: **55682**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1855982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.48	0.0020	0.5000	0	97.0	85	115			
Calcium	50	1.0	50.00	0	99.6	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.48	0.0020	0.5000	0	95.6	85	115			
Potassium	51	1.0	50.00	0	103	85	115			
Zinc	0.48	0.010	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-A**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**A55817**	RunNo:	**55817**					
Prep Date:		Analysis Date:	**11/21/2018**	SeqNo:	**1862323**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LLLCS-A**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**A55817**	RunNo:	**55817**					
Prep Date:		Analysis Date:	**11/21/2018**	SeqNo:	**1862325**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	0.66	1.0	0.5000	0	132	50	150			J

Sample ID	**LCS-A**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**A55817**	RunNo:	**55817**					
Prep Date:		Analysis Date:	**11/21/2018**	SeqNo:	**1862327**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.4	85	115			

Sample ID	**MB-C**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**C56108**	RunNo:	**56108**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874287**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID	**LCS-C**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**C56108**	RunNo:	**56108**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874288**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.50	0.0060	0.5000	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	49	1.0	50.00	0	98.0	85	115			

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C56108**	RunNo:	**56108**					
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874289**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0058	0.0060	0.006000	0	97.2	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**C56108**	RunNo:	**56108**
Prep Date:		Analysis Date:	**12/5/2018**	SeqNo:	**1874289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0049	0.0050	0.005000	0	97.3	50	150			J
Sodium	0.66	1.0	0.5000	0	131	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **MB-41493**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41493**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856876** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-41493**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41493**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856877** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	97.5	50	150			J
Cadmium	0.0022	0.0020	0.002000	0	108	50	150			
Chromium	0.0058	0.0060	0.006000	0	97.5	50	150			J
Copper	0.0063	0.0060	0.006000	0	105	50	150			
Iron	0.022	0.020	0.02000	0	112	50	150			
Manganese	0.0021	0.0020	0.002000	0	106	50	150			
Silver	0.0055	0.0050	0.005000	0	110	50	150			
Zinc	0.0072	0.010	0.005000	0	144	50	150			J

Sample ID **LCS-41493**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41493**	RunNo: **55720**
Prep Date: **11/13/2018**	Analysis Date: **11/16/2018**	SeqNo: **1856878** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.8	85	115			
Cadmium	0.51	0.0020	0.5000	0	101	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Copper	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.49	0.010	0.5000	0	97.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861119** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00099	0.0010	0.001000	0	99.1	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.0	50	150			J
Selenium	0.0013	0.0010	0.001000	0	125	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B55814**	RunNo: **55814**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.8	85	115			
Lead	0.012	0.00050	0.01250	0	97.6	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B55887**	RunNo: **55887**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864498** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Uranium	ND	0.00050								

Sample ID **MSLLLCS-B**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B55887**	RunNo: **55887**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1864499** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00051	0.00050	0.0005000	0	102	50	150			
Uranium	0.00051	0.00050	0.0005000	0	101	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MSLCS-B**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**
Client ID:	**LCSW**	Batch ID:	**B55887**	RunNo:	**55887**
Prep Date:		Analysis Date:	**11/27/2018**	SeqNo:	**1864500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	102	85	115			
Uranium	0.013	0.00050	0.01250	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-41493**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41493**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855480**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41493**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41493**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855482**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	104	50	150			
Lead	0.00050	0.00050	0.0005000	0	101	50	150			
Selenium	0.0014	0.0010	0.001000	0	137	50	150			
Uranium	0.00045	0.00050	0.0005000	0	90.3	50	150			J

Sample ID	**MSLCS-41493**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41493**	RunNo:	**55677**					
Prep Date:	**11/13/2018**	Analysis Date:	**11/15/2018**	SeqNo:	**1855484**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.012	0.00050	0.01250	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Uranium	0.011	0.00050	0.01250	0	90.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-41679**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **41679**			RunNo: **55835**					
Prep Date:	**11/21/2018**	Analysis Date: **11/21/2018**			SeqNo: **1862625**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000063	0.00020								J

Sample ID	**LCS-41679**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **41679**			RunNo: **55835**					
Prep Date:	**11/21/2018**	Analysis Date: **11/21/2018**			SeqNo: **1862626**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.3	80	120			

Sample ID	**MB-41714**	SampType: **MBLK**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID: **41714**			RunNo: **55871**					
Prep Date:	**11/26/2018**	Analysis Date: **11/26/2018**			SeqNo: **1863826**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000053	0.00020								J

Sample ID	**LCS-41714**	SampType: **LCS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID: **41714**			RunNo: **55871**					
Prep Date:	**11/26/2018**	Analysis Date: **11/26/2018**			SeqNo: **1863827**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Sample ID	**1811496-010FMS**	SampType: **MS**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**Duplicate**	Batch ID: **41714**			RunNo: **55871**					
Prep Date:	**11/26/2018**	Analysis Date: **11/26/2018**			SeqNo: **1863829**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00006809	97.6	75	125			

Sample ID	**1811496-010FMSD**	SampType: **MSD**			TestCode: **EPA Method 245.1: Mercury**					
Client ID:	**Duplicate**	Batch ID: **41714**			RunNo: **55871**					
Prep Date:	**11/26/2018**	Analysis Date: **11/26/2018**			SeqNo: **1863830**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00006809	97.5	75	125	0.0819	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55569**	RunNo: **55569**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55569**	RunNo: **55569**
Prep Date:	Analysis Date: **11/9/2018**	SeqNo: **1850582** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Chloride	4.8	0.50	5.000	0	96.8	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	99.7	90	110			
Bromide	2.5	0.10	2.500	0	98.1	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	9.9	0.50	10.00	0	99.5	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55597**	RunNo: **55597**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851356** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55597**	RunNo: **55597**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851357** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-41450**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852152**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41450**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852155**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.076	0.010	0.1000	0	75.7	70	130			

Sample ID	**LCSD-41450**	SampType:	**LCSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSS02**	Batch ID:	**41450**	RunNo:	**55616**					
Prep Date:	**11/12/2018**	Analysis Date:	**11/13/2018**	SeqNo:	**1852156**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.12	0.010	0.1000	0	122	70	130	46.7	20	R

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**LCS-41474**	SampType: **LCS**		TestCode: **EPA Method 8015M/D: Diesel Range**					
Client ID:	**LCSW**	Batch ID: **41474**		RunNo: **55605**					
Prep Date:	**11/12/2018**	Analysis Date: **11/13/2018**		SeqNo: **1851933**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	88.1	70	130			
Surr: DNOP	0.51		0.5000		102	76.7	135			

Sample ID	**MB-41474**	SampType: **MBLK**		TestCode: **EPA Method 8015M/D: Diesel Range**					
Client ID:	**PBW**	Batch ID: **41474**		RunNo: **55605**					
Prep Date:	**11/12/2018**	Analysis Date: **11/13/2018**		SeqNo: **1851934**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		109	76.7	135			

Sample ID	**1811496-010BMS**	SampType: **MS**		TestCode: **EPA Method 8015M/D: Diesel Range**					
Client ID:	**Duplicate**	Batch ID: **41474**		RunNo: **55605**					
Prep Date:	**11/12/2018**	Analysis Date: **11/13/2018**		SeqNo: **1852892**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	82.8	143			
Surr: DNOP	0.55		0.5000		110	76.7	135			

Sample ID	**1811496-010BMSD**	SampType: **MSD**		TestCode: **EPA Method 8015M/D: Diesel Range**					
Client ID:	**Duplicate**	Batch ID: **41474**		RunNo: **55605**					
Prep Date:	**11/12/2018**	Analysis Date: **11/13/2018**		SeqNo: **1853139**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	98.2	82.8	143	0.863	20	
Surr: DNOP	0.54		0.5000		108	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55581**	RunNo: **55581**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851107** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.0	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55581**	RunNo: **55581**
Prep Date:	Analysis Date: **11/12/2018**	SeqNo: **1851108** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.6	79.5	127			
Surr: BFB	24		20.00		118	72.8	125			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55615**	RunNo: **55615**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	20		20.00		99.5	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55615**	RunNo: **55615**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.6	79.5	127			
Surr: BFB	22		20.00		109	72.8	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852398** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.1	70	130			
Toluene	19	1.0	20.00	0	95.7	70	130			
Chlorobenzene	19	1.0	20.00	0	96.4	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.8	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	85.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**
12-Dec-18

Client: Marathon
Project: 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55623**	RunNo: **55623**
Prep Date:	Analysis Date: **11/13/2018**	SeqNo: **1852425** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID **1811496-007ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1 to EP2**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853866** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	92	5.0	100.0	1.335	90.5	60.5	137			
Toluene	97	5.0	100.0	1.066	95.6	70	130			
Chlorobenzene	96	5.0	100.0	0	96.4	70	130			
1,1-Dichloroethene	120	5.0	100.0	0	121	67.6	130			
Trichloroethene (TCE)	88	5.0	100.0	0	88.2	70	130			
Surr: 1,2-Dichloroethane-d4	48		50.00		96.1	70	130			
Surr: 4-Bromofluorobenzene	49		50.00		97.2	70	130			
Surr: Dibromofluoromethane	48		50.00		96.2	70	130			
Surr: Toluene-d8	49		50.00		98.9	70	130			

Sample ID **1811496-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **STP1 to EP2**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853867** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	89	5.0	100.0	1.335	87.8	60.5	137	2.99	20	
Toluene	90	5.0	100.0	1.066	89.1	70	130	6.99	20	
Chlorobenzene	90	5.0	100.0	0	90.5	70	130	6.38	20	
1,1-Dichloroethene	120	5.0	100.0	0	120	67.6	130	0.845	20	
Trichloroethene (TCE)	83	5.0	100.0	0	82.5	70	130	6.73	20	
Surr: 1,2-Dichloroethane-d4	48		50.00		96.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	49		50.00		98.5	70	130	0	0	
Surr: Dibromofluoromethane	47		50.00		94.8	70	130	0	0	
Surr: Toluene-d8	48		50.00		96.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853887** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853887** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853893** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.5	70	130			
Toluene	18	1.0	20.00	0	88.2	70	130			
Chlorobenzene	18	1.0	20.00	0	88.3	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A55650**	RunNo: **55650**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1853893** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	16	1.0	20.00	0	82.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854721** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.5	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854724** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-41443**	SampType:	**MBLK**	TestCode:	**SM5210B: BOD**					
Client ID:	**PBW**	Batch ID:	**41443**	RunNo:	**55661**					
Prep Date:	**11/9/2018**	Analysis Date:	**11/14/2018**	SeqNo:	**1854505**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID	**LCS-41443**	SampType:	**LCS**	TestCode:	**SM5210B: BOD**					
Client ID:	**LCSW**	Batch ID:	**41443**	RunNo:	**55661**					
Prep Date:	**11/9/2018**	Analysis Date:	**11/14/2018**	SeqNo:	**1854506**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	120	2.0	198.0	0	59.2	84.6	115.4			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**lcs-1 99.0uS eC**	SampType:	**LCS**	TestCode:	**SM2510B: Specific Conductance**					
Client ID:	**LCSW**	Batch ID:	**R55578**	RunNo:	**55578**					
Prep Date:		Analysis Date:	**11/12/2018**	SeqNo:	**1851784**	Units:	**µmhos/cm**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity		100	5.0	99.00	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811496**

12-Dec-18

Client: Marathon

Project: 4th Qtr GW Sampling

Sample ID	**MB-41523**	SampType:	**MBLK**		TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**PBW**	Batch ID:	**41523**		RunNo:	**55686**					
Prep Date:	**11/14/2018**	Analysis Date:	**11/16/2018**		SeqNo:	**1855403**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids	ND	20.0									

Sample ID	**LCS-41523**	SampType:	**LCS**		TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**LCSW**	Batch ID:	**41523**		RunNo:	**55686**					
Prep Date:	**11/14/2018**	Analysis Date:	**11/16/2018**		SeqNo:	**1855404**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids	1020	20.0	1000	0	102	80	120				

Sample ID	**1811496-007DDUP**	SampType:	**DUP**		TestCode:	**SM2540C MOD: Total Dissolved Solids**					
Client ID:	**STP1 to EP2**	Batch ID:	**41523**		RunNo:	**55686**					
Prep Date:	**11/14/2018**	Analysis Date:	**11/16/2018**		SeqNo:	**1855407**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Dissolved Solids	3150	100						2.20	5	*D	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: **1811496** RcptNo: **1**

Received By: **Jazzmine Burkhead** **11/8/2018 3:50:00 PM**

Completed By: **Ashley Gallegos** **11/8/2018 4:00:06 PM**

Reviewed By: ENM 11/9/18

labeled by: TO 11/9/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 16
(<2 or >12 unless noted)
Adjusted? NO
Checked by: TO 11/9/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Not Present			
2	3.0	Good	Not Present			

Chain-of-Custody Record

Client: Marathon Gallup Refining

Mailing Address: 92 Giant Crossing Rd Gallup, NM 87301

Phone #: 505 722 3833

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 4th QTR GW Sampling

Project #: OW, STP1 to EP2

Project Manager: Cheryl Johnson

Sampler: C Johnson

On Ice: ☑ Yes ☐ No

Sample Temperature: 3.1-1.0(CF)=2.1 4.0-1.0(CF)=3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811496	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	WQCC Metals T+D	Gen Chem	8011 - EDB	BOD/COD/TDS	Air Bubbles (Y or N)
11/7/18	0700	AQ	Trip Blank			-001			~~X~~							X						
"	0700	AQ	Field Blank			-002										X						
	1340	AQ	OW-50			-003			X							X		X	X	X		
	1435	AQ	OW-52			-004			X							X		X	X	X		
11/8/18	0700	AQ	Trip Blank			-005										X						
	0700	AQ	Field Blank			-006										X						
	0830	AQ	STP1 to EP2			-007			X							X		X			X	
	0933	AQ	OW-01			-008			X				X	X		X		X		X		
	1100	AQ	OW-10			-009			X				X	X		X		X		X		
	ENMI	1108/18	Duplicate			-010			X				X	X		X		X		X		

Date	Time	Relinquished by:	Received by:	Date	Time
11/8/18	1552			11/08/18	15:50
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Gen Chem - pH, specCond, Cations Anions Client

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	8080		100	10	11/14/2018 14:36	WG1195930

Method Blank (MB)

(MB) R3359812-1 11/14/18 14:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3.00	10.0

L1038334-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1038334-03 11/14/18 14:33 • (DUP) R3359812-3 11/14/18 14:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	1180	1170	5	0.868		20

L1043765-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1043765-04 11/14/18 14:38 • (DUP) R3359812-6 11/14/18 14:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3359812-2 11/14/18 14:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
COD	222	237	107	90.0-110	

L1043765-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1043765-01 11/14/18 14:37 • (MS) R3359812-4 11/14/18 14:37 • (MSD) R3359812-5 11/14/18 14:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	455	468	114	117	1	80.0-120			2.85	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 26, 2018

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 4th Qtr GW OrderNo.: 1811695

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 11/14/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1811695**
Date: **12/26/2018**

CLIENT: MARATHON GALLUP
Project: 4th Qtr GW

Analytical Notes Regarding EPA Method 8270:
The LCS had low recoveries.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 4th Qtr GW
Collection Date:
Lab ID: 1811695-001
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Toluene	ND	0.17	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Naphthalene	ND	0.29	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Acetone	1.7	0.76	10	J	µg/L	1	11/15/2018 2:32:39 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 2:32:39 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 2:32:39 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 4th Qtr GW
Collection Date:
Lab ID: 1811695-001
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 2:32:39 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 2:32:39 PM	R55666
Methylene Chloride	0.29	0.21	3.0	J	µg/L	1	11/15/2018 2:32:39 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 2:32:39 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 2:32:39 PM	R55666
Surr: 1,2-Dichloroethane-d4	96.9	0	70-130		%Rec	1	11/15/2018 2:32:39 PM	R55666
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	11/15/2018 2:32:39 PM	R55666
Surr: Dibromofluoromethane	89.6	0	70-130		%Rec	1	11/15/2018 2:32:39 PM	R55666
Surr: Toluene-d8	95.4	0	70-130		%Rec	1	11/15/2018 2:32:39 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 4th Qtr GW
Collection Date: 11/13/2018 7:00:00 AM
Lab ID: 1811695-002 **Matrix:** AQUEOUS **Received Date:** 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Toluene	0.18	0.17	1.0	J	µg/L	1	11/15/2018 3:01:07 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Naphthalene	0.57	0.29	2.0	J	µg/L	1	11/15/2018 3:01:07 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Acetone	2.7	0.76	10	J	µg/L	1	11/15/2018 3:01:07 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 3:01:07 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 3:01:07 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 3:01:07 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 4th Qtr GW
Collection Date: 11/13/2018 7:00:00 AM
Lab ID: 1811695-002
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 3:01:07 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 3:01:07 PM	R55666
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 3:01:07 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 3:01:07 PM	R55666
Surr: 1,2-Dichloroethane-d4	97.2	0	70-130		%Rec	1	11/15/2018 3:01:07 PM	R55666
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	11/15/2018 3:01:07 PM	R55666
Surr: Dibromofluoromethane	94.0	0	70-130		%Rec	1	11/15/2018 3:01:07 PM	R55666
Surr: Toluene-d8	95.5	0	70-130		%Rec	1	11/15/2018 3:01:07 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/15/2018 10:54:43 A	41531
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/15/2018 10:54:43 A	41531
Surr: DNOP	108	0	76.7-135		%Rec	1	11/15/2018 10:54:43 A	41531
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/14/2018 3:50:56 PM	R55667
Chloride	390	10	10		mg/L	20	11/14/2018 4:03:20 PM	R55667
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/14/2018 3:50:56 PM	R55667
Bromide	0.61	0.10	0.50		mg/L	5	11/14/2018 3:50:56 PM	R55667
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/14/2018 3:50:56 PM	R55667
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/14/2018 3:50:56 PM	R55667
Sulfate	94	0.63	2.5		mg/L	5	11/14/2018 3:50:56 PM	R55667
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.11	0.00099	0.0020		mg/L	1	12/17/2018 12:10:02 P	B56396
Cadmium	ND	0.0010	0.0020		mg/L	1	12/17/2018 12:10:02 P	B56396
Calcium	4.4	0.078	1.0		mg/L	1	12/17/2018 12:10:02 P	B56396
Chromium	ND	0.0013	0.0060		mg/L	1	12/17/2018 12:10:02 P	B56396
Copper	ND	0.0032	0.0060		mg/L	1	12/17/2018 12:10:02 P	B56396
Iron	ND	0.016	0.020		mg/L	1	12/17/2018 12:10:02 P	B56396
Magnesium	0.43	0.25	1.0	J	mg/L	1	12/17/2018 12:10:02 P	B56396
Manganese	0.0088	0.00039	0.0020		mg/L	1	12/17/2018 12:10:02 P	B56396
Potassium	0.99	0.11	1.0	J	mg/L	1	12/17/2018 12:10:02 P	B56396
Silver	ND	0.0018	0.0050		mg/L	1	12/17/2018 12:10:02 P	B56396
Sodium	430	0.82	5.0		mg/L	5	12/17/2018 12:12:19 P	B56396
Zinc	0.021	0.0021	0.010		mg/L	1	12/17/2018 12:10:02 P	B56396
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.14	0.0010	0.0020		mg/L	1	11/26/2018 7:38:12 PM	41657
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 7:38:12 PM	41657
Chromium	0.0034	0.0018	0.0060	J	mg/L	1	11/26/2018 7:38:12 PM	41657
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 7:38:12 PM	41657
Iron	0.70	0.010	0.020	*	mg/L	1	11/26/2018 7:38:12 PM	41657
Manganese	0.023	0.0011	0.0020		mg/L	1	11/26/2018 7:38:12 PM	41657
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 7:38:12 PM	41657
Zinc	0.0037	0.0033	0.010	J	mg/L	1	11/26/2018 7:38:12 PM	41657
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	12/3/2018 3:27:06 PM	B56037
Lead	ND	0.00017	0.00050		mg/L	1	12/3/2018 3:27:06 PM	B56037
Selenium	0.0012	0.00076	0.0010		mg/L	1	12/3/2018 3:27:06 PM	B56037

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.031	0.00048	0.0025	*	mg/L	5	12/3/2018 4:03:23 PM	B56037
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	11/27/2018 7:10:42 PM	41657
Lead	0.00036	0.00023	0.00050	J	mg/L	1	11/27/2018 7:10:42 PM	41657
Selenium	0.0017	0.00098	0.0010		mg/L	1	11/27/2018 7:10:42 PM	41657
Uranium	0.027	0.00034	0.0025		mg/L	5	12/5/2018 3:01:03 PM	41657
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 12:57:43 P	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 12:57:43 P	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 12:57:43 P	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 12:57:43 P	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 12:57:43 P	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
Bis(2-ethylhexyl)phthalate	16	8.1	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 12:57:43 P	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 12:57:43 P	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 12:57:43 P	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 12:57:43 P	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 12:57:43 P	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 12:57:43 P	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 12:57:43 P	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 12:57:43 P	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 12:57:43 P	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 12:57:43 P	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 12:57:43 P	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 12:57:43 P	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 12:57:43 P	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 12:57:43 P	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 12:57:43 P	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 12:57:43 P	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 12:57:43 P	41637
Surr: 2-Fluorophenol	46.7	0	15-74.1		%Rec	1	12/10/2018 12:57:43 P	41637
Surr: Phenol-d5	36.0	0	15-59.8		%Rec	1	12/10/2018 12:57:43 P	41637
Surr: 2,4,6-Tribromophenol	65.5	0	22.1-112		%Rec	1	12/10/2018 12:57:43 P	41637
Surr: Nitrobenzene-d5	74.9	0	33.2-94		%Rec	1	12/10/2018 12:57:43 P	41637
Surr: 2-Fluorobiphenyl	67.8	0	34-90.9		%Rec	1	12/10/2018 12:57:43 P	41637
Surr: 4-Terphenyl-d14	74.5	0	15-149		%Rec	1	12/10/2018 12:57:43 P	41637
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Toluene	ND	0.17	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Methyl tert-butyl ether (MTBE)	5.0	0.46	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2-Dichloroethane (EDC)	0.36	0.19	1.0	J	µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Naphthalene	ND	0.29	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Acetone	2.4	0.76	10	J	µg/L	1	11/15/2018 3:29:42 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 3:29:42 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 3:29:42 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1-Dichloroethane	0.37	0.18	1.0	J	µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 3:29:42 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 3:29:42 PM	R55666
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 3:29:42 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 3:29:42 PM	R55666
Surr: 1,2-Dichloroethane-d4	95.2	0	70-130		%Rec	1	11/15/2018 3:29:42 PM	R55666
Surr: 4-Bromofluorobenzene	99.0	0	70-130		%Rec	1	11/15/2018 3:29:42 PM	R55666
Surr: Dibromofluoromethane	90.1	0	70-130		%Rec	1	11/15/2018 3:29:42 PM	R55666
Surr: Toluene-d8	94.9	0	70-130		%Rec	1	11/15/2018 3:29:42 PM	R55666
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5B
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:05:00 PM
Lab ID: 1811695-003
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	11/15/2018 3:29:42 PM	A55666
Surr: BFB	97.4	0	70-130		%Rec	1	11/15/2018 3:29:42 PM	A55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/15/2018 11:18:32 A	41531
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/15/2018 11:18:32 A	41531
Surr: DNOP	114	0	76.7-135		%Rec	1	11/15/2018 11:18:32 A	41531
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	1.1	0.50	0.50		mg/L	5	11/14/2018 4:15:45 PM	R55667
Chloride	89	2.5	2.5		mg/L	5	11/14/2018 4:15:45 PM	R55667
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/14/2018 4:15:45 PM	R55667
Bromide	0.47	0.10	0.50	J	mg/L	5	11/14/2018 4:15:45 PM	R55667
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/14/2018 4:15:45 PM	R55667
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/14/2018 4:15:45 PM	R55667
Sulfate	250	2.5	10		mg/L	20	11/14/2018 4:28:10 PM	R55667
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.00099	0.0020		mg/L	1	12/17/2018 12:14:28 P	B56396
Cadmium	ND	0.0010	0.0020		mg/L	1	12/17/2018 12:14:28 P	B56396
Calcium	8.1	0.078	1.0		mg/L	1	12/17/2018 12:14:28 P	B56396
Chromium	0.012	0.0013	0.0060		mg/L	1	12/17/2018 12:14:28 P	B56396
Copper	0.0070	0.0032	0.0060		mg/L	1	12/17/2018 12:14:28 P	B56396
Iron	2.1	0.082	0.10	*	mg/L	5	12/17/2018 12:16:29 P	B56396
Magnesium	1.5	0.25	1.0		mg/L	1	12/17/2018 12:14:28 P	B56396
Manganese	0.11	0.00039	0.0020	*	mg/L	1	12/17/2018 12:14:28 P	B56396
Potassium	2.1	0.11	1.0		mg/L	1	12/17/2018 12:14:28 P	B56396
Silver	ND	0.0018	0.0050		mg/L	1	12/17/2018 12:14:28 P	B56396
Sodium	440	0.82	5.0		mg/L	5	12/17/2018 12:16:29 P	B56396
Zinc	0.028	0.0021	0.010		mg/L	1	12/17/2018 12:14:28 P	B56396
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.28	0.0010	0.0020		mg/L	1	11/26/2018 7:40:13 PM	41657
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 7:40:13 PM	41657
Chromium	0.038	0.0018	0.0060		mg/L	1	11/26/2018 7:40:13 PM	41657
Copper	0.017	0.0041	0.0060		mg/L	1	11/26/2018 7:40:13 PM	41657
Iron	10	0.10	0.20	*	mg/L	10	11/29/2018 1:14:50 PM	41657
Manganese	0.21	0.0011	0.0020	*	mg/L	1	11/26/2018 7:40:13 PM	41657
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 7:40:13 PM	41657
Zinc	0.038	0.0033	0.010		mg/L	1	11/26/2018 7:40:13 PM	41657
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	12/3/2018 3:29:31 PM	B56037
Lead	0.0027	0.00017	0.00050		mg/L	1	12/3/2018 3:29:31 PM	B56037
Selenium	ND	0.00076	0.0010		mg/L	1	12/3/2018 3:29:31 PM	B56037

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.054	0.00048	0.0025	*	mg/L	5	12/3/2018 4:05:49 PM	B56037
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.013	0.00041	0.0010	*	mg/L	1	11/27/2018 7:12:39 PM	41657
Lead	0.0069	0.00023	0.00050		mg/L	1	11/27/2018 7:12:39 PM	41657
Selenium	ND	0.00098	0.0010		mg/L	1	11/27/2018 7:12:39 PM	41657
Uranium	0.051	0.00034	0.0025	*	mg/L	5	12/5/2018 3:02:59 PM	41657
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Acenaphthylene	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Aniline	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Anthracene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Azobenzene	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benz(a)anthracene	ND	26	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzo(a)pyrene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzo(b)fluoranthene	ND	36	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzo(k)fluoranthene	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzoic acid	ND	32	100		µg/L	1	12/10/2018 1:26:41 PM	41637
Benzyl alcohol	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Bis(2-ethylhexyl)phthalate	130	40	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Butyl benzyl phthalate	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Carbazole	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Chloroaniline	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Chloronaphthalene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Chlorophenol	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Chrysene	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Di-n-butyl phthalate	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Di-n-octyl phthalate	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Dibenzofuran	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
1,2-Dichlorobenzene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
1,3-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Diethyl phthalate	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Dimethyl phthalate	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2,4-Dichlorophenol	ND	29	100		µg/L	1	12/10/2018 1:26:41 PM	41637
2,4-Dimethylphenol	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	12/10/2018 1:26:41 PM	41637
2,4-Dinitrophenol	ND	19	100		µg/L	1	12/10/2018 1:26:41 PM	41637
2,4-Dinitrotoluene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2,6-Dinitrotoluene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Fluoranthene	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Fluorene	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Hexachlorobenzene	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Hexachlorobutadiene	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Hexachloroethane	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Isophorone	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
1-Methylnaphthalene	ND	35	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Methylnaphthalene	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Methylphenol	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
3+4-Methylphenol	ND	27	50		µg/L	1	12/10/2018 1:26:41 PM	41637
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	12/10/2018 1:26:41 PM	41637
N-Nitrosodimethylamine	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Naphthalene	ND	25	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Nitroaniline	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637
3-Nitroaniline	ND	34	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Nitroaniline	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Nitrobenzene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2-Nitrophenol	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
4-Nitrophenol	ND	28	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Pentachlorophenol	ND	26	100		µg/L	1	12/10/2018 1:26:41 PM	41637
Phenanthrene	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Phenol	ND	30	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Pyrene	ND	33	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Pyridine	ND	27	50		µg/L	1	12/10/2018 1:26:41 PM	41637
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	12/10/2018 1:26:41 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	12/10/2018 1:26:41 PM	41637
Surr: 2-Fluorophenol	42.8	0	15-74.1		%Rec	1	12/10/2018 1:26:41 PM	41637
Surr: Phenol-d5	33.2	0	15-59.8		%Rec	1	12/10/2018 1:26:41 PM	41637
Surr: 2,4,6-Tribromophenol	74.6	0	22.1-112		%Rec	1	12/10/2018 1:26:41 PM	41637
Surr: Nitrobenzene-d5	60.9	0	33.2-94		%Rec	1	12/10/2018 1:26:41 PM	41637
Surr: 2-Fluorobiphenyl	51.1	0	34-90.9		%Rec	1	12/10/2018 1:26:41 PM	41637
Surr: 4-Terphenyl-d14	63.9	0	15-149		%Rec	1	12/10/2018 1:26:41 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Toluene	ND	0.17	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Naphthalene	ND	0.29	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Acetone	2.0	0.76	10	J	µg/L	1	11/15/2018 4:55:17 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 4:55:17 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 4:55:17 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 4:55:17 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 4:55:17 PM	R55666
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 4:55:17 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 4:55:17 PM	R55666
Surr: 1,2-Dichloroethane-d4	97.4	0	70-130		%Rec	1	11/15/2018 4:55:17 PM	R55666
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	11/15/2018 4:55:17 PM	R55666
Surr: Dibromofluoromethane	92.7	0	70-130		%Rec	1	11/15/2018 4:55:17 PM	R55666
Surr: Toluene-d8	95.9	0	70-130		%Rec	1	11/15/2018 4:55:17 PM	R55666
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-4B
Project: 4th Qtr GW
Collection Date: 11/13/2018 2:30:00 PM
Lab ID: 1811695-004
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	11/15/2018 4:55:17 PM	A55666
Surr: BFB	99.3	0	70-130		%Rec	1	11/15/2018 4:55:17 PM	A55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/15/2018 11:42:16 A	41531
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/15/2018 11:42:16 A	41531
Surr: DNOP	106	0	76.7-135		%Rec	1	11/15/2018 11:42:16 A	41531
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/14/2018 4:40:34 PM	R55667
Chloride	1300	50	50		mg/L	100	11/26/2018 7:56:05 PM	R55870
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/14/2018 4:40:34 PM	R55667
Bromide	1.5	0.10	0.50		mg/L	5	11/14/2018 4:40:34 PM	R55667
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/14/2018 4:40:34 PM	R55667
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/14/2018 4:40:34 PM	R55667
Sulfate	210	0.63	2.5		mg/L	5	11/14/2018 4:40:34 PM	R55667
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.093	0.00099	0.0020		mg/L	1	12/17/2018 12:25:30 P	B56396
Cadmium	ND	0.0010	0.0020		mg/L	1	12/17/2018 12:25:30 P	B56396
Calcium	58	0.078	1.0		mg/L	1	12/17/2018 12:25:30 P	B56396
Chromium	ND	0.0013	0.0060		mg/L	1	12/17/2018 12:25:30 P	B56396
Copper	ND	0.0032	0.0060		mg/L	1	12/17/2018 12:25:30 P	B56396
Iron	0.43	0.016	0.020	*	mg/L	1	12/17/2018 12:25:30 P	B56396
Magnesium	7.0	0.25	1.0		mg/L	1	12/17/2018 12:25:30 P	B56396
Manganese	0.031	0.00039	0.0020		mg/L	1	12/17/2018 12:25:30 P	B56396
Potassium	3.1	0.11	1.0		mg/L	1	12/17/2018 12:25:30 P	B56396
Silver	ND	0.0018	0.0050		mg/L	1	12/17/2018 12:25:30 P	B56396
Sodium	1000	3.3	20		mg/L	20	12/17/2018 12:41:24 P	B56396
Zinc	0.034	0.0021	0.010		mg/L	1	12/17/2018 12:25:30 P	B56396
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.19	0.0010	0.0020		mg/L	1	11/26/2018 7:42:05 PM	41657
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 7:42:05 PM	41657
Chromium	0.0080	0.0018	0.0060		mg/L	1	11/26/2018 7:42:05 PM	41657
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 7:42:05 PM	41657
Iron	3.4	0.051	0.10	*	mg/L	5	11/28/2018 8:50:22 PM	41657
Manganese	0.093	0.0011	0.0020	*	mg/L	1	11/26/2018 7:42:05 PM	41657
Silver	0.0015	0.0012	0.0050	J	mg/L	1	11/26/2018 7:42:05 PM	41657
Zinc	0.0090	0.0033	0.010	J	mg/L	1	11/26/2018 7:42:05 PM	41657
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00048	0.00042	0.0010	J	mg/L	1	12/3/2018 3:31:56 PM	B56037
Lead	ND	0.00017	0.00050		mg/L	1	12/3/2018 3:31:56 PM	B56037
Selenium	ND	0.00076	0.0010		mg/L	1	12/3/2018 3:31:56 PM	B56037

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.042	0.00048	0.0025	*	mg/L	5	12/3/2018 4:08:14 PM	B56037
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0014	0.00041	0.0010		mg/L	1	11/27/2018 7:14:36 PM	41657
Lead	0.0027	0.00023	0.00050		mg/L	1	11/27/2018 7:14:36 PM	41657
Selenium	0.0010	0.00098	0.0010		mg/L	1	11/27/2018 7:14:36 PM	41657
Uranium	0.042	0.00034	0.0025	*	mg/L	5	12/5/2018 3:04:55 PM	41657
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Acenaphthylene	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Aniline	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Anthracene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Azobenzene	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benz(a)anthracene	ND	26	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzo(a)pyrene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzo(b)fluoranthene	ND	36	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzo(k)fluoranthene	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzoic acid	ND	32	100		µg/L	1	12/10/2018 1:55:52 PM	41637
Benzyl alcohol	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Butyl benzyl phthalate	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Carbazole	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Chloroaniline	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Chloronaphthalene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Chlorophenol	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Chrysene	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Di-n-butyl phthalate	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Di-n-octyl phthalate	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Dibenzofuran	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
1,2-Dichlorobenzene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
1,3-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Diethyl phthalate	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Dimethyl phthalate	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2,4-Dichlorophenol	ND	29	100		µg/L	1	12/10/2018 1:55:52 PM	41637
2,4-Dimethylphenol	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	12/10/2018 1:55:52 PM	41637
2,4-Dinitrophenol	ND	19	100		µg/L	1	12/10/2018 1:55:52 PM	41637
2,4-Dinitrotoluene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2,6-Dinitrotoluene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Fluoranthene	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Fluorene	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Hexachlorobenzene	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Hexachlorobutadiene	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Hexachloroethane	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Isophorone	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
1-Methylnaphthalene	ND	35	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Methylnaphthalene	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Methylphenol	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
3+4-Methylphenol	ND	27	50		µg/L	1	12/10/2018 1:55:52 PM	41637
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	12/10/2018 1:55:52 PM	41637
N-Nitrosodimethylamine	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Naphthalene	ND	25	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Nitroaniline	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637
3-Nitroaniline	ND	34	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Nitroaniline	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Nitrobenzene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2-Nitrophenol	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
4-Nitrophenol	ND	28	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Pentachlorophenol	ND	26	100		µg/L	1	12/10/2018 1:55:52 PM	41637
Phenanthrene	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Phenol	ND	30	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Pyrene	ND	33	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Pyridine	ND	27	50		µg/L	1	12/10/2018 1:55:52 PM	41637
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	12/10/2018 1:55:52 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	12/10/2018 1:55:52 PM	41637
Surr: 2-Fluorophenol	44.6	0	15-74.1		%Rec	1	12/10/2018 1:55:52 PM	41637
Surr: Phenol-d5	35.0	0	15-59.8		%Rec	1	12/10/2018 1:55:52 PM	41637
Surr: 2,4,6-Tribromophenol	70.8	0	22.1-112		%Rec	1	12/10/2018 1:55:52 PM	41637
Surr: Nitrobenzene-d5	72.0	0	33.2-94		%Rec	1	12/10/2018 1:55:52 PM	41637
Surr: 2-Fluorobiphenyl	59.2	0	34-90.9		%Rec	1	12/10/2018 1:55:52 PM	41637
Surr: 4-Terphenyl-d14	76.1	0	15-149		%Rec	1	12/10/2018 1:55:52 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Toluene	ND	0.17	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Methyl tert-butyl ether (MTBE)	28	0.46	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2-Dichloroethane (EDC)	0.62	0.19	1.0	J	µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Naphthalene	ND	0.29	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Acetone	1.8	0.76	10	J	µg/L	1	11/15/2018 5:23:56 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 5:23:56 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 5:23:56 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1-Dichloroethane	0.76	0.18	1.0	J	µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 5:23:56 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 5:23:56 PM	R55666
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 5:23:56 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 5:23:56 PM	R55666
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	11/15/2018 5:23:56 PM	R55666
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	11/15/2018 5:23:56 PM	R55666
Surr: Dibromofluoromethane	95.2	0	70-130		%Rec	1	11/15/2018 5:23:56 PM	R55666
Surr: Toluene-d8	95.3	0	70-130		%Rec	1	11/15/2018 5:23:56 PM	R55666
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: BW-5C
Project: 4th Qtr GW
Collection Date: 11/13/2018 12:55:00 PM
Lab ID: 1811695-005
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	11/15/2018 5:23:56 PM	A55666
Surr: BFB	98.5	0	70-130		%Rec	1	11/15/2018 5:23:56 PM	A55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/15/2018 12:06:04 P	41531
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/15/2018 12:06:04 P	41531
Surr: DNOP	102	0	76.7-135		%Rec	1	11/15/2018 12:06:04 P	41531
EPA METHOD 300.0: ANIONS							Analyst: **MRA**	
Fluoride	ND	0.50	0.50		mg/L	5	11/14/2018 5:05:23 PM	R55667
Chloride	330	25	25		mg/L	50	11/26/2018 8:08:56 PM	R55870
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/14/2018 5:05:23 PM	R55667
Bromide	0.65	0.10	0.50		mg/L	5	11/14/2018 5:05:23 PM	R55667
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/14/2018 5:05:23 PM	R55667
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/14/2018 5:05:23 PM	R55667
Sulfate	93	0.63	2.5		mg/L	5	11/14/2018 5:05:23 PM	R55667
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.10	0.00099	0.0020		mg/L	1	12/17/2018 12:30:05 P	B56396
Cadmium	ND	0.0010	0.0020		mg/L	1	12/17/2018 12:30:05 P	B56396
Calcium	4.3	0.078	1.0		mg/L	1	12/17/2018 12:30:05 P	B56396
Chromium	0.0014	0.0013	0.0060	J	mg/L	1	12/17/2018 12:30:05 P	B56396
Copper	ND	0.0032	0.0060		mg/L	1	12/17/2018 12:30:05 P	B56396
Iron	0.037	0.016	0.020		mg/L	1	12/17/2018 12:30:05 P	B56396
Magnesium	0.43	0.25	1.0	J	mg/L	1	12/17/2018 12:30:05 P	B56396
Manganese	0.0080	0.00039	0.0020		mg/L	1	12/17/2018 12:30:05 P	B56396
Potassium	1.1	0.11	1.0		mg/L	1	12/17/2018 12:30:05 P	B56396
Silver	ND	0.0018	0.0050		mg/L	1	12/17/2018 12:30:05 P	B56396
Sodium	440	0.82	5.0		mg/L	5	12/17/2018 12:32:23 P	B56396
Zinc	0.022	0.0021	0.010		mg/L	1	12/17/2018 12:30:05 P	B56396
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.14	0.0010	0.0020		mg/L	1	11/26/2018 7:44:09 PM	41657
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 7:44:09 PM	41657
Chromium	0.0075	0.0018	0.0060		mg/L	1	11/26/2018 7:44:09 PM	41657
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 7:44:09 PM	41657
Iron	1.3	0.051	0.10	*	mg/L	5	11/28/2018 8:52:29 PM	41657
Manganese	0.034	0.0011	0.0020		mg/L	1	11/26/2018 7:44:09 PM	41657
Silver	0.0025	0.0012	0.0050	J	mg/L	1	11/26/2018 7:44:09 PM	41657
Zinc	0.0052	0.0033	0.010	J	mg/L	1	11/26/2018 7:44:09 PM	41657
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0016	0.00042	0.0010		mg/L	1	12/3/2018 3:34:21 PM	B56037
Lead	ND	0.00017	0.00050		mg/L	1	12/3/2018 3:34:21 PM	B56037
Selenium	0.0013	0.00076	0.0010		mg/L	1	12/3/2018 3:34:21 PM	B56037

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Uranium	0.032	0.00048	0.0025	*	mg/L	5	12/3/2018 4:10:39 PM	B56037
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0020	0.00041	0.0010		mg/L	1	11/27/2018 7:16:33 PM	41657
Lead	0.00051	0.00023	0.00050		mg/L	1	11/27/2018 7:16:33 PM	41657
Selenium	0.0017	0.00098	0.0010		mg/L	1	11/27/2018 7:16:33 PM	41657
Uranium	0.029	0.00034	0.0025		mg/L	5	12/5/2018 3:08:49 PM	41657
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 2:25:26 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 2:25:26 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 2:25:26 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 2:25:26 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 2:25:26 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 2:25:26 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 2:25:26 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 2:25:26 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 2:25:26 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 2:25:26 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 2:25:26 PM	41637
Surr: 2-Fluorophenol	36.2	0	15-74.1		%Rec	1	12/10/2018 2:25:26 PM	41637
Surr: Phenol-d5	26.0	0	15-59.8		%Rec	1	12/10/2018 2:25:26 PM	41637
Surr: 2,4,6-Tribromophenol	58.3	0	22.1-112		%Rec	1	12/10/2018 2:25:26 PM	41637
Surr: Nitrobenzene-d5	50.2	0	33.2-94		%Rec	1	12/10/2018 2:25:26 PM	41637
Surr: 2-Fluorobiphenyl	49.2	0	34-90.9		%Rec	1	12/10/2018 2:25:26 PM	41637
Surr: 4-Terphenyl-d14	76.0	0	15-149		%Rec	1	12/10/2018 2:25:26 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
Benzene	ND	0.17	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Toluene	ND	0.17	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Methyl tert-butyl ether (MTBE)	5.2	0.46	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2-Dichloroethane (EDC)	0.36	0.19	1.0	J	µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Naphthalene	ND	0.29	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Acetone	2.8	0.76	10	J	µg/L	1	11/15/2018 5:52:31 PM	R55666
Bromobenzene	ND	0.32	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Bromoform	ND	0.32	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Bromomethane	ND	0.27	3.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
2-Butanone	ND	1.4	10		µg/L	1	11/15/2018 5:52:31 PM	R55666
Carbon disulfide	ND	0.39	10		µg/L	1	11/15/2018 5:52:31 PM	R55666
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Chloroethane	ND	0.16	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Chloroform	ND	0.24	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Chloromethane	ND	0.32	3.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Dibromomethane	ND	0.32	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **AG**	
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1-Dichloroethane	0.37	0.18	1.0	J	µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
2-Hexanone	ND	0.91	10		µg/L	1	11/15/2018 5:52:31 PM	R55666
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/15/2018 5:52:31 PM	R55666
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Styrene	ND	0.25	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/15/2018 5:52:31 PM	R55666
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/15/2018 5:52:31 PM	R55666
Surr: 1,2-Dichloroethane-d4	98.2	0	70-130		%Rec	1	11/15/2018 5:52:31 PM	R55666
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	11/15/2018 5:52:31 PM	R55666
Surr: Dibromofluoromethane	92.8	0	70-130		%Rec	1	11/15/2018 5:52:31 PM	R55666
Surr: Toluene-d8	97.0	0	70-130		%Rec	1	11/15/2018 5:52:31 PM	R55666
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: DUPLICATE
Project: 4th Qtr GW
Collection Date: 11/13/2018 3:10:00 PM
Lab ID: 1811695-006
Matrix: AQUEOUS
Received Date: 11/14/2018 7:24:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	0.031	0.050		mg/L	1	11/15/2018 5:52:31 PM	A55666
Surr: BFB	99.1	0	70-130		%Rec	1	11/15/2018 5:52:31 PM	A55666

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56396**	RunNo: **56396**
Prep Date:	Analysis Date: **12/17/2018**	SeqNo: **1885221** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56396**	RunNo: **56396**
Prep Date:	Analysis Date: **12/17/2018**	SeqNo: **1885222** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.1	85	115			
Calcium	49	1.0	50.00	0	98.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Magnesium	49	1.0	50.00	0	98.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Potassium	49	1.0	50.00	0	97.1	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.9	85	115			
Zinc	0.48	0.010	0.5000	0	96.8	85	115			

Sample ID **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56396**	RunNo: **56396**
Prep Date:	Analysis Date: **12/17/2018**	SeqNo: **1885223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.1	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	97.1	50	150			J
Calcium	0.52	1.0	0.5000	0	104	50	150			J
Chromium	0.0064	0.0060	0.006000	0	106	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID	**LLLCS-B**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**BatchQC**	Batch ID:	**B56396**	RunNo:	**56396**
Prep Date:		Analysis Date:	**12/17/2018**	SeqNo:	**1885223** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0062	0.0060	0.006000	0	104	50	150			
Iron	0.022	0.020	0.02000	0	111	50	150			
Magnesium	0.53	1.0	0.5000	0	105	50	150			J
Manganese	0.0020	0.0020	0.002000	0	102	50	150			
Potassium	0.51	1.0	0.5000	0	103	50	150			J
Silver	0.0045	0.0050	0.005000	0	89.7	50	150			J
Sodium	0.56	1.0	0.5000	0	112	50	150			J
Zinc	0.0068	0.010	0.005000	0	136	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **MB-41657**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41657**	RunNo: **55850**
Prep Date: **11/20/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864115** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-41657**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41657**	RunNo: **55850**
Prep Date: **11/20/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864116** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	98.0	50	150			J
Cadmium	0.0020	0.0020	0.002000	0	102	50	150			
Chromium	0.0061	0.0060	0.006000	0	102	50	150			
Copper	0.0071	0.0060	0.006000	0	119	50	150			
Iron	0.024	0.020	0.02000	0	120	50	150			
Manganese	0.0022	0.0020	0.002000	0	112	50	150			
Silver	0.0050	0.0050	0.005000	0	101	50	150			

Sample ID **LCS-41657**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41657**	RunNo: **55850**
Prep Date: **11/20/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864117** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.6	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**
26-Dec-18

Client: MARATHON GALLUP
Project: 4th Qtr GW

Sample ID	**LLLCS-41657**	SampType:	**LCSLL**		TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**BatchQC**	Batch ID:	**41657**		RunNo:	**55850**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1864140**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Zinc	0.0075	0.010	0.005000	0	150	50	150			J	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	95.0	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00089	0.0010	0.001000	0	89.4	50	150			J
Uranium	0.00054	0.00050	0.0005000	0	108	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.6	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.023	0.0010	0.02500	0	90.2	85	115			
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870577** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID	**MB-41657**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863462**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41657**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863466**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0012	0.0010	0.001000	0	124	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.5	50	150			J
Selenium	0.0012	0.0010	0.001000	0	116	50	150			

Sample ID	**MSLCS-41657**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863468**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0	109	85	115			
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.027	0.0010	0.02500	0	107	85	115			

Sample ID	**MB-41657**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863523**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41657**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863527**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00047	0.00050	0.0005000	0	94.9	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID	**MSLCS-41657**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41657**	RunNo:	**55865**					
Prep Date:	**11/20/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863529**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**
26-Dec-18

Client: MARATHON GALLUP
Project: 4th Qtr GW

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55667**	RunNo: **55667**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1855058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55667**	RunNo: **55667**
Prep Date:	Analysis Date: **11/14/2018**	SeqNo: **1855059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Chloride	5.0	0.50	5.000	0	99.1	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	102	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	106	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.0	90	110			
Sulfate	9.7	0.50	10.00	0	96.6	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55870**	RunNo: **55870**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863709** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55870**	RunNo: **55870**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **LCS-41531**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41531**	RunNo: **55665**
Prep Date: **11/14/2018**	Analysis Date: **11/15/2018**	SeqNo: **1854803** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.7	70	130			
Surr: DNOP	0.49		0.5000		97.4	76.7	135			

Sample ID **MB-41531**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41531**	RunNo: **55665**
Prep Date: **11/14/2018**	Analysis Date: **11/15/2018**	SeqNo: **1854804** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854721** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.0	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.5	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854724** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854724** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	0.33	3.0								J
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55666**	RunNo: **55666**
Prep Date:	Analysis Date: **11/15/2018**	SeqNo: **1854724** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **lcs-41637**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878102** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	45	10	100.0	0	45.4	55.1	104			S
4-Chloro-3-methylphenol	110	10	200.0	0	54.7	57	115			S
2-Chlorophenol	80	10	200.0	0	39.8	43.4	112			S
1,4-Dichlorobenzene	32	10	100.0	0	31.9	38	95.2			S
2,4-Dinitrotoluene	69	10	100.0	0	68.6	55.1	96.7			
N-Nitrosodi-n-propylamine	44	10	100.0	0	44.2	55	112			S
4-Nitrophenol	99	10	200.0	0	49.4	16.6	93			
Pentachlorophenol	130	20	200.0	0	63.4	43.2	104			
Phenol	55	10	200.0	0	27.7	21.3	85.7			
Pyrene	92	10	100.0	0	91.6	64.9	105			
1,2,4-Trichlorobenzene	36	10	100.0	0	36.4	42.6	107			S
Surr: 2-Fluorophenol	47		200.0		23.3	15	74.1			
Surr: Phenol-d5	34		200.0		17.2	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		67.4	22.1	112			
Surr: Nitrobenzene-d5	33		100.0		33.1	33.2	94			S
Surr: 2-Fluorobiphenyl	32		100.0		32.1	34	90.9			S
Surr: 4-Terphenyl-d14	83		100.0		83.0	15	149			

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		50.2	15	74.1			
Surr: Phenol-d5	76		200.0		38.0	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.2	22.1	112			
Surr: Nitrobenzene-d5	77		100.0		76.8	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		76.1	34	90.9			
Surr: 4-Terphenyl-d14	87		100.0		87.3	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811695**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th Qtr GW

Sample ID	**1811695-003ams**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**BW-5B**	Batch ID:	**A55666**		RunNo:	**55666**					
Prep Date:		Analysis Date:	**11/15/2018**		SeqNo:	**1855662**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	107	63.4	130				
Surr: BFB	10		10.00		102	70	130				

Sample ID	**1811695-003amsd**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**BW-5B**	Batch ID:	**A55666**		RunNo:	**55666**					
Prep Date:		Analysis Date:	**11/15/2018**		SeqNo:	**1855663**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.50	0.050	0.5000	0	100	63.4	130	6.15	20		
Surr: BFB	10		10.00		99.6	70	130	0	0		

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**A55666**		RunNo:	**55666**					
Prep Date:		Analysis Date:	**11/15/2018**		SeqNo:	**1855667**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	0.56	0.050	0.5000	0	112	70	130				
Surr: BFB	10		10.00		100	70	130				

Sample ID	**rb**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**A55666**		RunNo:	**55666**					
Prep Date:		Analysis Date:	**11/15/2018**		SeqNo:	**1855668**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	0.050									
Surr: BFB	9.6		10.00		96.1	70	130				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1811695 RcptNo: 1

Received By: **Anne Thorne** 11/14/2018 7:24:00 AM Anne Thorne

Completed By: **Anne Thorne** 11/14/2018 9:46:44 AM Anne Thorne

Reviewed By: ENM 11/14/18

Labeled by: JAB 11/14/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)

Adjusted? No

Checked by: JAB 11/14/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

CUSTODY SEALS INTACT ON ALL SAMPLE BOTTLES/at 11/14/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			
2	1.4	Good	Yes			

Chain-of-Custody Record

Client: Marathon Gallup Refinery

Mailing Address: 92 Giant Crossing Rd Gallup NM

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 4th QTR GW

Project #: BW Wells

Project Manager: C Johnson

Sampler: C Johnson

On Ice: ☒ Yes ☐ No

Sample Temperature: #1 Cooler 2.1 CF 1.0 = 1.1
#2 Cooler 2.4 CF 1.0 = 1.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	VOCs Methods TPH	Cations/Anions			Air Bubbles (Y or N)
11/3/18	0700	AQ	Trip Blank			181195 001										X						
	0700	AQ	Field Blank			002										X						
	1505	AQ	BW-5B			003			X	X						X	X	X	X			
	1430	AQ	BW-4B			004			X	X						X	X	X	X			
	1255	AQ	BW-5C			005			X	X						X	X	X	X			
	1510	AQ	Duplicate			006			X	X						X	X	X	X			
										A5												
										11/4/18												

Date: 11/3/18 Time: 1600 Relinquished by:

Received by: Date Time 11/3/18 1605

Date: 11/4/18 Time: 0724 Relinquished by:

Received by: Date Time 11/4/18 0724

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 26, 2018

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 4th QTR 2018 GW OrderNo.: 1811857

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 16 sample(s) on 11/15/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1811857**
Date: **12/26/2018**

CLIENT: MARATHON GALLUP
Project: 4th QTR 2018 GW

Analytical Notes Regarding EPA Method 8270:
The LCS had low recoveries.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 7:00:00 AM
Lab ID: 1811857-001
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 1:06:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 1:06:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 1:06:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 7:00:00 AM
Lab ID: 1811857-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 1:06:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 1:06:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 1:06:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 1:06:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	11/20/2018 1:06:00 PM	R55795
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	11/20/2018 1:06:00 PM	R55795
Surr: Dibromofluoromethane	98.2	0	70-130		%Rec	1	11/20/2018 1:06:00 PM	R55795
Surr: Toluene-d8	99.5	0	70-130		%Rec	1	11/20/2018 1:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 7:00:00 AM
Lab ID: 1811857-002 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Naphthalene	0.31	0.29	2.0	J	µg/L	1	11/20/2018 1:30:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Acetone	3.6	0.76	10	J	µg/L	1	11/20/2018 1:30:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 1:30:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 1:30:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 1:30:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 7:00:00 AM
Lab ID: 1811857-002
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 1:30:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 1:30:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 1:30:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 1:30:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	11/20/2018 1:30:00 PM	R55795
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/20/2018 1:30:00 PM	R55795
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	11/20/2018 1:30:00 PM	R55795
Surr: Toluene-d8	95.8	0	70-130		%Rec	1	11/20/2018 1:30:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/19/2018 8:52:39 PM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 8:52:39 PM	41593
Surr: DNOP	121	0	76.7-135		%Rec	1	11/19/2018 8:52:39 PM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/20/2018 12:33:00 A	W5574
Surr: BFB	87.9	0	72.8-125		%Rec	1	11/20/2018 12:33:00 A	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 11:32:22 A	R55729
Chloride	230	10	10		mg/L	20	11/16/2018 11:44:47 A	R55729
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 11:32:22 A	R55729
Bromide	0.49	0.10	0.50	J	mg/L	5	11/16/2018 11:32:22 A	R55729
Nitrogen, Nitrate (As N)	0.57	0.25	0.50		mg/L	5	11/16/2018 11:32:22 A	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 11:32:22 A	R55729
Sulfate	100	0.63	2.5		mg/L	5	11/16/2018 11:32:22 A	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.032	0.00099	0.0020		mg/L	1	12/21/2018 5:05:21 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:05:21 PM	D56532
Calcium	9.8	0.078	1.0		mg/L	1	12/21/2018 5:05:21 PM	D56532
Chromium	0.0027	0.0013	0.0060	J	mg/L	1	12/21/2018 5:05:21 PM	D56532
Copper	0.0039	0.0032	0.0060	J	mg/L	1	12/21/2018 5:05:21 PM	D56532
Iron	0.16	0.016	0.020		mg/L	1	12/21/2018 5:05:21 PM	D56532
Magnesium	0.50	0.25	1.0	J	mg/L	1	12/21/2018 5:05:21 PM	D56532
Manganese	0.0049	0.00039	0.0020		mg/L	1	12/21/2018 5:05:21 PM	D56532
Potassium	1.2	0.11	1.0		mg/L	1	12/21/2018 5:05:21 PM	D56532
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 5:05:21 PM	D56532
Sodium	530	3.3	20		mg/L	20	12/21/2018 6:50:17 PM	D56532
Zinc	0.016	0.0021	0.010		mg/L	1	12/21/2018 5:05:21 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.12	0.0010	0.0020		mg/L	1	11/26/2018 6:24:47 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:24:47 PM	41625
Chromium	0.010	0.0018	0.0060		mg/L	1	11/26/2018 6:24:47 PM	41625
Copper	0.0066	0.0041	0.0060		mg/L	1	11/26/2018 6:24:47 PM	41625
Iron	7.8	0.10	0.20	*	mg/L	10	11/29/2018 9:40:59 AM	41625
Manganese	0.23	0.0011	0.0020	*	mg/L	1	11/26/2018 6:24:47 PM	41625
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 6:24:47 PM	41625
Zinc	0.036	0.0033	0.010		mg/L	1	11/26/2018 6:24:47 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0069	0.00042	0.0010		mg/L	1	12/3/2018 3:36:46 PM	B56037
Lead	0.00028	0.00017	0.00050	J	mg/L	1	12/3/2018 3:36:46 PM	B56037
Selenium	0.0090	0.00076	0.0010		mg/L	1	12/3/2018 3:36:46 PM	B56037
Uranium	0.18	0.0019	0.010	*	mg/L	20	12/3/2018 4:26:30 PM	B56037
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0077	0.00041	0.0010		mg/L	1	11/26/2018 7:09:12 PM	41625
Lead	0.0075	0.00023	0.00050		mg/L	1	11/26/2018 7:09:12 PM	41625
Selenium	0.0096	0.00098	0.0010		mg/L	1	11/26/2018 7:09:12 PM	41625
Uranium	0.18	0.00068	0.0050	*	mg/L	10	11/27/2018 5:40:49 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000058	0.000038	0.00020	J	mg/L	1	12/4/2018 2:35:24 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Acenaphthylene	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Aniline	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Anthracene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Azobenzene	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benz(a)anthracene	ND	26	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzo(a)pyrene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzo(b)fluoranthene	ND	36	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzo(k)fluoranthene	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzoic acid	ND	32	100		µg/L	1	12/10/2018 2:54:48 PM	41637
Benzyl alcohol	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Butyl benzyl phthalate	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Carbazole	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Chloroaniline	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Chloronaphthalene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Chlorophenol	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Chrysene	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Di-n-butyl phthalate	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Dibenzofuran	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
1,2-Dichlorobenzene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
1,3-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
1,4-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Diethyl phthalate	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Dimethyl phthalate	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4-Dichlorophenol	ND	29	100		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4-Dimethylphenol	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4-Dinitrophenol	ND	19	100		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4-Dinitrotoluene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2,6-Dinitrotoluene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Fluoranthene	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Fluorene	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Hexachlorobenzene	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Hexachlorobutadiene	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Hexachloroethane	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Isophorone	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
1-Methylnaphthalene	ND	35	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Methylnaphthalene	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Methylphenol	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
3+4-Methylphenol	ND	27	50		µg/L	1	12/10/2018 2:54:48 PM	41637
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	12/10/2018 2:54:48 PM	41637
N-Nitrosodimethylamine	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Naphthalene	ND	25	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Nitroaniline	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
3-Nitroaniline	ND	34	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Nitroaniline	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Nitrobenzene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2-Nitrophenol	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
4-Nitrophenol	ND	28	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Pentachlorophenol	ND	26	100		µg/L	1	12/10/2018 2:54:48 PM	41637
Phenanthrene	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	30	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Pyrene	ND	33	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Pyridine	ND	27	50		µg/L	1	12/10/2018 2:54:48 PM	41637
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	12/10/2018 2:54:48 PM	41637
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	12/10/2018 2:54:48 PM	41637
Surr: 2-Fluorophenol	39.6	0	15-74.1		%Rec	1	12/10/2018 2:54:48 PM	41637
Surr: Phenol-d5	29.5	0	15-59.8		%Rec	1	12/10/2018 2:54:48 PM	41637
Surr: 2,4,6-Tribromophenol	70.8	0	22.1-112		%Rec	1	12/10/2018 2:54:48 PM	41637
Surr: Nitrobenzene-d5	51.8	0	33.2-94		%Rec	1	12/10/2018 2:54:48 PM	41637
Surr: 2-Fluorobiphenyl	48.4	0	34-90.9		%Rec	1	12/10/2018 2:54:48 PM	41637
Surr: 4-Terphenyl-d14	75.6	0	15-149		%Rec	1	12/10/2018 2:54:48 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2,4-Trimethylbenzene	0.50	0.25	1.0	J	µg/L	1	11/20/2018 1:54:00 PM	R55795
1,3,5-Trimethylbenzene	0.23	0.23	1.0	J	µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 1:54:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 1:54:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 1:54:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 1:54:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 1:54:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 1:54:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 1:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-44
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:02:00 AM
Lab ID: 1811857-003
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	11/20/2018 1:54:00 PM	R55795
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	11/20/2018 1:54:00 PM	R55795
Surr: Dibromofluoromethane	98.4	0	70-130		%Rec	1	11/20/2018 1:54:00 PM	R55795
Surr: Toluene-d8	98.0	0	70-130		%Rec	1	11/20/2018 1:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.40	0.048	0.094		µg/L	10	11/20/2018 8:08:27 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	63	0.63	1.0		mg/L	1	11/19/2018 10:04:44 P	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 10:04:44 P	41593
Surr: DNOP	111	0	76.7-135		%Rec	1	11/19/2018 10:04:44 P	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.56	0.024	0.050		mg/L	1	11/20/2018 12:55:42 A	W5574
Surr: BFB	118	0	72.8-125		%Rec	1	11/20/2018 12:55:42 A	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.89	0.50	0.50		mg/L	5	11/16/2018 11:57:11 A	R55729
Chloride	1100	50	50		mg/L	100	11/27/2018 7:22:31 PM	R55875
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 11:57:11 A	R55729
Bromide	1.5	0.10	0.50		mg/L	5	11/16/2018 11:57:11 A	R55729
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 11:57:11 A	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 11:57:11 A	R55729
Sulfate	87	0.63	2.5		mg/L	5	11/16/2018 11:57:11 A	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.037	0.00099	0.0020		mg/L	1	12/21/2018 5:24:23 PM	C56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:24:23 PM	C56532
Calcium	23	0.078	1.0		mg/L	1	12/21/2018 5:24:23 PM	C56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 5:24:23 PM	C56532
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 5:24:23 PM	C56532
Iron	0.020	0.016	0.020	J	mg/L	1	12/21/2018 5:24:23 PM	C56532
Magnesium	3.1	0.25	1.0		mg/L	1	12/21/2018 5:24:23 PM	C56532
Manganese	0.055	0.00039	0.0020	*	mg/L	1	12/21/2018 5:24:23 PM	C56532
Potassium	1.4	0.11	1.0		mg/L	1	12/21/2018 5:24:23 PM	C56532
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 5:24:23 PM	C56532
Sodium	770	3.3	20		mg/L	20	12/21/2018 6:52:18 PM	C56532
Zinc	0.025	0.0021	0.010		mg/L	1	12/21/2018 5:24:23 PM	C56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.035	0.0010	0.0020		mg/L	1	11/26/2018 6:26:38 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:26:38 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:26:38 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:26:38 PM	41625
Iron	0.039	0.010	0.020		mg/L	1	11/26/2018 6:26:38 PM	41625
Manganese	0.051	0.0011	0.0020	*	mg/L	1	11/26/2018 6:26:38 PM	41625
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 6:26:38 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	ND	0.0033	0.010		mg/L	1	11/26/2018 6:26:38 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0019	0.00042	0.0010		mg/L	1	12/4/2018 3:54:00 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:54:00 PM	C56062
Selenium	0.0012	0.00076	0.0010		mg/L	1	12/4/2018 3:54:00 PM	C56062
Uranium	0.0092	0.000096	0.00050		mg/L	1	12/4/2018 3:54:00 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	11/26/2018 7:11:09 PM	41625
Lead	ND	0.00023	0.00050		mg/L	1	11/26/2018 7:11:09 PM	41625
Selenium	0.0015	0.00098	0.0010		mg/L	1	11/26/2018 7:11:09 PM	41625
Uranium	0.0092	0.000068	0.00050		mg/L	1	11/26/2018 7:11:09 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000045	0.000038	0.00020	J	mg/L	1	12/4/2018 2:37:43 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Acenaphthylene	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Aniline	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Anthracene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Azobenzene	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benz(a)anthracene	ND	26	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzo(a)pyrene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzo(b)fluoranthene	ND	36	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzo(g,h,i)perylene	ND	28	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzo(k)fluoranthene	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzoic acid	110	32	100		µg/L	1	12/10/2018 3:23:57 PM	41637
Benzyl alcohol	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Bis(2-chloroethoxy)methane	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Bis(2-chloroethyl)ether	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Bis(2-chloroisopropyl)ether	ND	24	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Bis(2-ethylhexyl)phthalate	ND	40	50		µg/L	1	12/10/2018 3:23:57 PM	41637
4-Bromophenyl phenyl ether	ND	35	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Butyl benzyl phthalate	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Carbazole	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
4-Chloro-3-methylphenol	ND	28	50		µg/L	1	12/10/2018 3:23:57 PM	41637
4-Chloroaniline	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Chloronaphthalene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Chlorophenol	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	36	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Chrysene	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Di-n-butyl phthalate	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Di-n-octyl phthalate	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Dibenz(a,h)anthracene	ND	28	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Dibenzofuran	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
1,2-Dichlorobenzene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
1,3-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
1,4-Dichlorobenzene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
3,3´-Dichlorobenzidine	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Diethyl phthalate	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Dimethyl phthalate	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4-Dichlorophenol	ND	29	100		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4-Dimethylphenol	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
4,6-Dinitro-2-methylphenol	ND	27	100		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4-Dinitrophenol	ND	19	100		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4-Dinitrotoluene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2,6-Dinitrotoluene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Fluoranthene	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Fluorene	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Hexachlorobenzene	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Hexachlorobutadiene	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Hexachlorocyclopentadiene	ND	20	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Hexachloroethane	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Indeno(1,2,3-cd)pyrene	ND	35	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Isophorone	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
1-Methylnaphthalene	290	35	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Methylnaphthalene	130	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Methylphenol	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
3+4-Methylphenol	ND	27	50		µg/L	1	12/10/2018 3:23:57 PM	41637
N-Nitrosodi-n-propylamine	ND	31	50		µg/L	1	12/10/2018 3:23:57 PM	41637
N-Nitrosodimethylamine	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
N-Nitrosodiphenylamine	ND	33	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Naphthalene	160	25	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Nitroaniline	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
3-Nitroaniline	ND	34	50		µg/L	1	12/10/2018 3:23:57 PM	41637
4-Nitroaniline	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Nitrobenzene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2-Nitrophenol	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	28	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Pentachlorophenol	ND	26	100		µg/L	1	12/10/2018 3:23:57 PM	41637
Phenanthrene	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Phenol	ND	30	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Pyrene	ND	33	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Pyridine	ND	27	50		µg/L	1	12/10/2018 3:23:57 PM	41637
1,2,4-Trichlorobenzene	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4,5-Trichlorophenol	ND	29	50		µg/L	1	12/10/2018 3:23:57 PM	41637
2,4,6-Trichlorophenol	ND	32	50		µg/L	1	12/10/2018 3:23:57 PM	41637
Surr: 2-Fluorophenol	46.0	0	15-74.1		%Rec	1	12/10/2018 3:23:57 PM	41637
Surr: Phenol-d5	30.7	0	15-59.8		%Rec	1	12/10/2018 3:23:57 PM	41637
Surr: 2,4,6-Tribromophenol	45.3	0	22.1-112		%Rec	1	12/10/2018 3:23:57 PM	41637
Surr: Nitrobenzene-d5	63.7	0	33.2-94		%Rec	1	12/10/2018 3:23:57 PM	41637
Surr: 2-Fluorobiphenyl	58.4	0	34-90.9		%Rec	1	12/10/2018 3:23:57 PM	41637
Surr: 4-Terphenyl-d14	76.6	0	15-149		%Rec	1	12/10/2018 3:23:57 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	30	0.35	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Toluene	2.1	0.34	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Ethylbenzene	8.7	0.45	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Methyl tert-butyl ether (MTBE)	5.0	0.91	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2,4-Trimethylbenzene	68	0.51	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,3,5-Trimethylbenzene	21	0.46	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2-Dichloroethane (EDC)	3.9	0.38	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Naphthalene	160	14	100		µg/L	50	11/21/2018 1:26:00 PM	A55807
1-Methylnaphthalene	94	0.67	8.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
2-Methylnaphthalene	110	0.69	8.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Acetone	15	1.5	20	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
Bromobenzene	ND	0.64	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Bromodichloromethane	ND	0.57	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Bromoform	ND	0.65	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Bromomethane	ND	0.55	6.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
2-Butanone	ND	2.8	20		µg/L	2	11/20/2018 3:06:00 PM	R55795
Carbon disulfide	ND	0.77	20		µg/L	2	11/20/2018 3:06:00 PM	R55795
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Chlorobenzene	ND	0.58	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Chloroethane	ND	0.33	4.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Chloroform	ND	0.47	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Chloromethane	ND	0.64	6.0		µg/L	2	11/20/2018 3:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
cis-1,2-DCE	ND	0.75	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Dibromochloromethane	ND	0.47	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Dibromomethane	ND	0.64	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1-Dichloroethane	0.56	0.35	2.0	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1-Dichloroethene	1.0	0.24	2.0	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
2-Hexanone	ND	1.8	20		µg/L	2	11/20/2018 3:06:00 PM	R55795
Isopropylbenzene	3.6	0.44	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
4-Isopropyltoluene	2.1	0.48	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
4-Methyl-2-pentanone	9.8	0.91	20	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
Methylene Chloride	ND	0.41	6.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
n-Butylbenzene	1.6	0.50	6.0	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
n-Propylbenzene	4.7	0.49	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
sec-Butylbenzene	1.3	0.40	2.0	J	µg/L	2	11/20/2018 3:06:00 PM	R55795
Styrene	ND	0.50	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
1,1,2-Trichloroethane	ND	0.47	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-42
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:28:00 AM
Lab ID: 1811857-004
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Vinyl chloride	ND	0.24	2.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Xylenes, Total	110	1.3	3.0		µg/L	2	11/20/2018 3:06:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	2	11/20/2018 3:06:00 PM	R55795
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	2	11/20/2018 3:06:00 PM	R55795
Surr: Dibromofluoromethane	99.5	0	70-130		%Rec	2	11/20/2018 3:06:00 PM	R55795
Surr: Toluene-d8	97.1	0	70-130		%Rec	2	11/20/2018 3:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	11/20/2018 3:03:24 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/19/2018 10:28:34 P	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 10:28:34 P	41593
Surr: DNOP	118	0	76.7-135		%Rec	1	11/19/2018 10:28:34 P	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.56	0.024	0.050		mg/L	1	11/20/2018 1:18:19 AM	W5574
Surr: BFB	86.8	0	72.8-125		%Rec	1	11/20/2018 1:18:19 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 12:22:00 P	R5572
Chloride	370	25	25		mg/L	50	11/27/2018 7:34:55 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 12:22:00 P	R5572
Bromide	1.2	0.10	0.50		mg/L	5	11/16/2018 12:22:00 P	R5572
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 12:22:00 P	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 12:22:00 P	R5572
Sulfate	89	0.63	2.5		mg/L	5	11/16/2018 12:22:00 P	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.043	0.00099	0.0020		mg/L	1	12/21/2018 5:33:14 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:33:14 PM	C5653
Calcium	26	0.078	1.0		mg/L	1	12/21/2018 5:33:14 PM	C5653
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 5:33:14 PM	C5653
Copper	0.0046	0.0032	0.0060	J	mg/L	1	12/21/2018 5:33:14 PM	C5653
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 5:33:14 PM	C5653
Magnesium	4.9	0.25	1.0		mg/L	1	12/21/2018 5:33:14 PM	C5653
Manganese	0.045	0.00039	0.0020		mg/L	1	12/21/2018 5:33:14 PM	C5653
Potassium	0.62	0.11	1.0	J	mg/L	1	12/21/2018 5:33:14 PM	C5653
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 5:33:14 PM	C5653
Sodium	610	3.3	20		mg/L	20	12/21/2018 6:54:37 PM	C5653
Zinc	0.023	0.0021	0.010		mg/L	1	12/21/2018 5:33:14 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.070	0.0010	0.0020		mg/L	1	11/26/2018 6:28:50 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:28:50 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:28:50 PM	41625
Copper	0.0042	0.0041	0.0060	J	mg/L	1	11/26/2018 6:28:50 PM	41625
Iron	0.81	0.010	0.020	*	mg/L	1	11/26/2018 6:28:50 PM	41625
Manganese	0.10	0.0011	0.0020	*	mg/L	1	11/26/2018 6:28:50 PM	41625
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 6:28:50 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0068	0.0033	0.010	J	mg/L	1	11/26/2018 6:28:50 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0022	0.00042	0.0010		mg/L	1	12/4/2018 3:56:29 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:56:29 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:56:29 PM	C56062
Uranium	0.047	0.00048	0.0025	*	mg/L	5	12/4/2018 4:18:15 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0026	0.00041	0.0010		mg/L	1	11/26/2018 7:13:06 PM	41625
Lead	0.00099	0.00023	0.00050		mg/L	1	11/26/2018 7:13:06 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:13:06 PM	41625
Uranium	0.055	0.00034	0.0025	*	mg/L	5	11/27/2018 5:42:46 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	12/4/2018 2:39:54 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Benzoic acid	17	6.3	20	J	µg/L	1	12/10/2018 3:53:18 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 3:53:18 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 3:53:18 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 3:53:18 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 3:53:18 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 3:53:18 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 3:53:18 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 3:53:18 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 3:53:18 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 3:53:18 PM	41637
Surr: 2-Fluorophenol	40.5	0	15-74.1		%Rec	1	12/10/2018 3:53:18 PM	41637
Surr: Phenol-d5	27.8	0	15-59.8		%Rec	1	12/10/2018 3:53:18 PM	41637
Surr: 2,4,6-Tribromophenol	70.0	0	22.1-112		%Rec	1	12/10/2018 3:53:18 PM	41637
Surr: Nitrobenzene-d5	61.3	0	33.2-94		%Rec	1	12/10/2018 3:53:18 PM	41637
Surr: 2-Fluorobiphenyl	53.2	0	34-90.9		%Rec	1	12/10/2018 3:53:18 PM	41637
Surr: 4-Terphenyl-d14	76.3	0	15-149		%Rec	1	12/10/2018 3:53:18 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.35	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Toluene	ND	0.34	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Ethylbenzene	ND	0.45	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Methyl tert-butyl ether (MTBE)	810	4.6	10		µg/L	10	11/20/2018 3:30:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.51	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.46	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2-Dichloroethane (EDC)	15	0.38	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.46	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Naphthalene	ND	0.58	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1-Methylnaphthalene	ND	0.67	8.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
2-Methylnaphthalene	0.72	0.69	8.0	J	µg/L	2	11/20/2018 3:54:00 PM	R55795
Acetone	ND	1.5	20		µg/L	2	11/20/2018 3:54:00 PM	R55795
Bromobenzene	ND	0.64	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Bromodichloromethane	ND	0.57	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Bromoform	ND	0.65	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Bromomethane	ND	0.55	6.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
2-Butanone	ND	2.8	20		µg/L	2	11/20/2018 3:54:00 PM	R55795
Carbon disulfide	ND	0.77	20		µg/L	2	11/20/2018 3:54:00 PM	R55795
Carbon Tetrachloride	ND	0.27	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Chlorobenzene	ND	0.58	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Chloroethane	ND	0.33	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Chloroform	ND	0.47	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Chloromethane	ND	0.64	6.0		µg/L	2	11/20/2018 3:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.50	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
4-Chlorotoluene	ND	0.56	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
cis-1,2-DCE	2.0	0.75	2.0	J	µg/L	2	11/20/2018 3:54:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.60	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.94	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Dibromochloromethane	ND	0.47	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Dibromomethane	ND	0.64	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2-Dichlorobenzene	ND	0.62	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,3-Dichlorobenzene	ND	0.63	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,4-Dichlorobenzene	ND	0.58	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Dichlorodifluoromethane	ND	0.52	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1-Dichloroethane	15	0.35	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1-Dichloroethene	26	0.24	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2-Dichloropropane	ND	0.33	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,3-Dichloropropane	ND	0.54	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
2,2-Dichloropropane	ND	0.47	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1-Dichloropropene	ND	0.33	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Hexachlorobutadiene	ND	0.78	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
2-Hexanone	ND	1.8	20		µg/L	2	11/20/2018 3:54:00 PM	R55795
Isopropylbenzene	ND	0.44	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
4-Isopropyltoluene	ND	0.48	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
4-Methyl-2-pentanone	ND	0.91	20		µg/L	2	11/20/2018 3:54:00 PM	R55795
Methylene Chloride	ND	0.41	6.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
n-Butylbenzene	ND	0.50	6.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
n-Propylbenzene	ND	0.49	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
sec-Butylbenzene	0.64	0.40	2.0	J	µg/L	2	11/20/2018 3:54:00 PM	R55795
Styrene	ND	0.50	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
tert-Butylbenzene	ND	0.44	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.50	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.66	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.30	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
trans-1,2-DCE	ND	0.36	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.55	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.56	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.53	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1,1-Trichloroethane	ND	0.33	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
1,1,2-Trichloroethane	0.83	0.47	2.0	J	µg/L	2	11/20/2018 3:54:00 PM	R55795
Trichloroethene (TCE)	ND	0.52	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Trichlorofluoromethane	ND	0.29	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-32
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 8:46:00 AM
Lab ID: 1811857-005 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	1.1	4.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Vinyl chloride	ND	0.24	2.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Xylenes, Total	ND	1.3	3.0		µg/L	2	11/20/2018 3:54:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	2	11/20/2018 3:54:00 PM	R55795
Surr: 4-Bromofluorobenzene	99.1	0	70-130		%Rec	2	11/20/2018 3:54:00 PM	R55795
Surr: Dibromofluoromethane	101	0	70-130		%Rec	2	11/20/2018 3:54:00 PM	R55795
Surr: Toluene-d8	98.2	0	70-130		%Rec	2	11/20/2018 3:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	11/20/2018 3:18:11 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/19/2018 10:52:38 P	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 10:52:38 P	41593
Surr: DNOP	114	0	76.7-135		%Rec	1	11/19/2018 10:52:38 P	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/20/2018 1:41:00 AM	W5574
Surr: BFB	85.1	0	72.8-125		%Rec	1	11/20/2018 1:41:00 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 12:46:49 P	R5572
Chloride	840	50	50		mg/L	100	11/27/2018 7:47:20 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 12:46:49 P	R5572
Bromide	2.3	0.10	0.50		mg/L	5	11/16/2018 12:46:49 P	R5572
Nitrogen, Nitrate (As N)	5.7	0.25	0.50		mg/L	5	11/16/2018 12:46:49 P	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 12:46:49 P	R5572
Sulfate	61	0.63	2.5		mg/L	5	11/16/2018 12:46:49 P	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.059	0.00099	0.0020		mg/L	1	12/21/2018 5:44:12 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:44:12 PM	C5653
Calcium	14	0.078	1.0		mg/L	1	12/21/2018 5:44:12 PM	C5653
Chromium	0.0021	0.0013	0.0060	J	mg/L	1	12/21/2018 5:44:12 PM	C5653
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 5:44:12 PM	C5653
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 5:44:12 PM	C5653
Magnesium	1.6	0.25	1.0		mg/L	1	12/21/2018 5:44:12 PM	C5653
Manganese	0.0024	0.00039	0.0020		mg/L	1	12/21/2018 5:44:12 PM	C5653
Potassium	1.5	0.11	1.0		mg/L	1	12/21/2018 5:44:12 PM	C5653
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 5:44:12 PM	C5653
Sodium	690	3.3	20		mg/L	20	12/21/2018 6:56:50 PM	C5653
Zinc	0.023	0.0021	0.010		mg/L	1	12/21/2018 5:44:12 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.062	0.0010	0.0020		mg/L	1	11/26/2018 6:30:48 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:30:48 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:30:48 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:30:48 PM	41625
Iron	0.055	0.010	0.020		mg/L	1	11/26/2018 6:30:48 PM	41625
Manganese	0.0049	0.0011	0.0020		mg/L	1	11/26/2018 6:30:48 PM	41625
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 6:30:48 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0035	0.0033	0.010	J	mg/L	1	11/26/2018 6:30:48 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0020	0.00042	0.0010		mg/L	1	12/4/2018 4:03:46 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 4:03:46 PM	C56062
Selenium	0.033	0.00076	0.0010		mg/L	1	12/4/2018 4:03:46 PM	C56062
Uranium	0.0092	0.000096	0.00050		mg/L	1	12/4/2018 4:03:46 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0022	0.00041	0.0010		mg/L	1	11/26/2018 7:15:03 PM	41625
Lead	ND	0.00023	0.00050		mg/L	1	11/26/2018 7:15:03 PM	41625
Selenium	0.035	0.00098	0.0010		mg/L	1	11/26/2018 7:15:03 PM	41625
Uranium	0.010	0.000068	0.00050		mg/L	1	11/26/2018 7:15:03 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000051	0.000038	0.00020	J	mg/L	1	12/4/2018 2:42:05 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 4:22:41 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 4:22:41 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 4:22:41 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 4:22:41 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 4:22:41 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 4:22:41 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 4:22:41 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 4:22:41 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 4:22:41 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 4:22:41 PM	41637
Surr: 2-Fluorophenol	35.4	0	15-74.1		%Rec	1	12/10/2018 4:22:41 PM	41637
Surr: Phenol-d5	23.6	0	15-59.8		%Rec	1	12/10/2018 4:22:41 PM	41637
Surr: 2,4,6-Tribromophenol	62.3	0	22.1-112		%Rec	1	12/10/2018 4:22:41 PM	41637
Surr: Nitrobenzene-d5	51.0	0	33.2-94		%Rec	1	12/10/2018 4:22:41 PM	41637
Surr: 2-Fluorobiphenyl	44.3	0	34-90.9		%Rec	1	12/10/2018 4:22:41 PM	41637
Surr: 4-Terphenyl-d14	88.7	0	15-149		%Rec	1	12/10/2018 4:22:41 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Methyl tert-butyl ether (MTBE)	1.4	0.46	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2,4-Trimethylbenzene	0.49	0.25	1.0	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2-Dichloroethane (EDC)	3.7	0.19	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Naphthalene	0.84	0.29	2.0	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
1-Methylnaphthalene	0.82	0.34	4.0	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
2-Methylnaphthalene	0.78	0.35	4.0	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 4:19:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 4:19:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 4:19:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 4:19:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1-Dichloroethane	4.3	0.18	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1-Dichloroethene	7.0	0.12	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 4:19:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 4:19:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
1,1,2-Trichloroethane	0.61	0.23	1.0	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-41
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:07:00 AM
Lab ID: 1811857-006
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 4:19:00 PM	R55795
Xylenes, Total	1.2	0.64	1.5	J	µg/L	1	11/20/2018 4:19:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	11/20/2018 4:19:00 PM	R55795
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	11/20/2018 4:19:00 PM	R55795
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	11/20/2018 4:19:00 PM	R55795
Surr: Toluene-d8	96.8	0	70-130		%Rec	1	11/20/2018 4:19:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/19/2018 11:16:36 P	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 11:16:36 P	41593
Surr: DNOP	121	0	76.7-135		%Rec	1	11/19/2018 11:16:36 P	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/20/2018 2:03:35 AM	W5574
Surr: BFB	86.4	0	72.8-125		%Rec	1	11/20/2018 2:03:35 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 1:11:39 PM	R5572
Chloride	2600	250	250		mg/L	500	11/27/2018 7:59:45 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/16/2018 1:24:04 PM	R5572
Bromide	1.4	0.10	0.50		mg/L	5	11/16/2018 1:11:39 PM	R5572
Nitrogen, Nitrate (As N)	15	0.25	0.50	*	mg/L	5	11/16/2018 1:11:39 PM	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 1:11:39 PM	R5572
Sulfate	290	2.5	10		mg/L	20	11/16/2018 1:24:04 PM	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.071	0.00099	0.0020		mg/L	1	12/21/2018 5:48:30 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:48:30 PM	C5653
Calcium	440	0.39	5.0		mg/L	5	12/21/2018 5:50:49 PM	C5653
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 5:48:30 PM	C5653
Copper	0.0032	0.0032	0.0060	J	mg/L	1	12/21/2018 5:48:30 PM	C5653
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 5:48:30 PM	C5653
Magnesium	65	0.25	1.0		mg/L	1	12/21/2018 5:48:30 PM	C5653
Manganese	0.26	0.00039	0.0020	*	mg/L	1	12/21/2018 5:48:30 PM	C5653
Potassium	4.6	0.11	1.0		mg/L	1	12/21/2018 5:48:30 PM	C5653
Silver	0.0088	0.0018	0.0050		mg/L	1	12/21/2018 5:48:30 PM	C5653
Sodium	1400	3.3	20		mg/L	20	12/21/2018 6:59:06 PM	C5653
Zinc	0.025	0.0021	0.010		mg/L	1	12/21/2018 5:48:30 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.091	0.0010	0.0020		mg/L	1	11/26/2018 6:32:57 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:32:57 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:32:57 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:32:57 PM	41625
Iron	0.95	0.010	0.020	*	mg/L	1	11/26/2018 6:32:57 PM	41625
Manganese	0.22	0.0011	0.0020	*	mg/L	1	11/26/2018 6:32:57 PM	41625
Silver	0.011	0.0012	0.0050		mg/L	1	11/26/2018 6:32:57 PM	41625
Zinc	0.0039	0.0033	0.010	J	mg/L	1	11/26/2018 6:32:57 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0020	0.00042	0.0010		mg/L	1	12/4/2018 4:06:11 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 4:06:11 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 4:06:11 PM	C56062
Uranium	0.028	0.00048	0.0025		mg/L	5	12/4/2018 4:20:40 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0050	0.00041	0.0010		mg/L	1	11/26/2018 7:20:56 PM	41625
Lead	0.00094	0.00023	0.00050		mg/L	1	11/26/2018 7:20:56 PM	41625
Selenium	0.0011	0.00098	0.0010		mg/L	1	11/26/2018 7:20:56 PM	41625
Uranium	0.032	0.00034	0.0025	*	mg/L	5	11/27/2018 5:44:43 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000047	0.000038	0.00020	J	mg/L	1	12/4/2018 2:44:17 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 4:52:00 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 4:52:00 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 4:52:00 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 4:52:00 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 4:52:00 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 4:52:00 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 4:52:00 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 4:52:00 PM	41637
Surr: 2-Fluorophenol	32.0	0	15-74.1		%Rec	1	12/10/2018 4:52:00 PM	41637
Surr: Phenol-d5	33.9	0	15-59.8		%Rec	1	12/10/2018 4:52:00 PM	41637
Surr: 2,4,6-Tribromophenol	54.7	0	22.1-112		%Rec	1	12/10/2018 4:52:00 PM	41637
Surr: Nitrobenzene-d5	62.2	0	33.2-94		%Rec	1	12/10/2018 4:52:00 PM	41637
Surr: 2-Fluorobiphenyl	63.2	0	34-90.9		%Rec	1	12/10/2018 4:52:00 PM	41637
Surr: 4-Terphenyl-d14	117	0	15-149		%Rec	1	12/10/2018 4:52:00 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2,4-Trimethylbenzene	0.61	0.25	1.0	J	µg/L	1	11/20/2018 4:43:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 4:43:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 4:43:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 4:43:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Chloroform	0.95	0.24	1.0	J	µg/L	1	11/20/2018 4:43:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 4:43:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 4:43:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 4:43:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 4:43:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-43
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:25:00 AM
Lab ID: 1811857-007
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	113	0	70-130		%Rec	1	11/20/2018 4:43:00 PM	R55795
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/20/2018 4:43:00 PM	R55795
Surr: Dibromofluoromethane	103	0	70-130		%Rec	1	11/20/2018 4:43:00 PM	R55795
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	11/20/2018 4:43:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0080	0.0048	0.0094	J	µg/L	1	11/20/2018 3:32:58 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	1.5	0.63	1.0		mg/L	1	11/19/2018 11:40:44 P	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/19/2018 11:40:44 P	41593
Surr: DNOP	124	0	76.7-135		%Rec	1	11/19/2018 11:40:44 P	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	16	0.49	1.0		mg/L	20	11/20/2018 2:26:16 AM	W5574
Surr: BFB	94.6	0	72.8-125		%Rec	20	11/20/2018 2:26:16 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 2:01:18 PM	R5572
Chloride	520	25	25		mg/L	50	11/27/2018 8:12:09 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 2:01:18 PM	R5572
Bromide	1.1	0.10	0.50		mg/L	5	11/16/2018 2:01:18 PM	R5572
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 2:01:18 PM	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 2:01:18 PM	R5572
Sulfate	27	0.63	2.5		mg/L	5	11/16/2018 2:01:18 PM	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.25	0.00099	0.0020		mg/L	1	12/21/2018 5:53:03 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:53:03 PM	C5653
Calcium	120	0.39	5.0		mg/L	5	12/21/2018 5:55:14 PM	C5653
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 5:53:03 PM	C5653
Copper	0.0035	0.0032	0.0060	J	mg/L	1	12/21/2018 5:53:03 PM	C5653
Iron	0.10	0.016	0.020		mg/L	1	12/21/2018 5:53:03 PM	C5653
Magnesium	21	0.25	1.0		mg/L	1	12/21/2018 5:53:03 PM	C5653
Manganese	1.8	0.0020	0.010	*	mg/L	5	12/21/2018 5:55:14 PM	C5653
Potassium	2.2	0.11	1.0		mg/L	1	12/21/2018 5:53:03 PM	C5653
Silver	0.0027	0.0018	0.0050	J	mg/L	1	12/21/2018 5:53:03 PM	C5653
Sodium	610	3.3	20		mg/L	20	12/21/2018 7:01:30 PM	C5653
Zinc	0.027	0.0021	0.010		mg/L	1	12/21/2018 5:53:03 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.28	0.0010	0.0020		mg/L	1	11/26/2018 6:35:06 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:35:06 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:35:06 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:35:06 PM	41625
Iron	0.70	0.010	0.020	*	mg/L	1	11/26/2018 6:35:06 PM	41625
Manganese	2.0	0.0055	0.010	*	mg/L	5	11/29/2018 9:42:52 AM	41625
Silver	0.0038	0.0012	0.0050	J	mg/L	1	11/26/2018 6:35:06 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0037	0.0033	0.010	J	mg/L	1	11/26/2018 6:35:06 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0013	0.00042	0.0010		mg/L	1	12/4/2018 4:08:36 PM	C56062
Lead	0.0012	0.00017	0.00050		mg/L	1	12/4/2018 4:08:36 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 4:08:36 PM	C56062
Uranium	0.013	0.000096	0.00050		mg/L	1	12/4/2018 4:08:36 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0026	0.00041	0.0010		mg/L	1	11/26/2018 7:22:53 PM	41625
Lead	0.0018	0.00023	0.00050		mg/L	1	11/26/2018 7:22:53 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:22:53 PM	41625
Uranium	0.012	0.000068	0.00050		mg/L	1	11/26/2018 7:22:53 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	12/4/2018 2:46:29 PM	41862
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Benzoic acid	19	6.3	20	J	µg/L	1	12/10/2018 5:21:15 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 5:21:15 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 5:21:15 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 5:21:15 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 5:21:15 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 5:21:15 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 5:21:15 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 5:21:15 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 5:21:15 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 5:21:15 PM	41637
Surr: 2-Fluorophenol	19.5	0	15-74.1		%Rec	1	12/10/2018 5:21:15 PM	41637
Surr: Phenol-d5	18.7	0	15-59.8		%Rec	1	12/10/2018 5:21:15 PM	41637
Surr: 2,4,6-Tribromophenol	60.2	0	22.1-112		%Rec	1	12/10/2018 5:21:15 PM	41637
Surr: Nitrobenzene-d5	27.3	0	33.2-94	S	%Rec	1	12/10/2018 5:21:15 PM	41637
Surr: 2-Fluorobiphenyl	34.5	0	34-90.9		%Rec	1	12/10/2018 5:21:15 PM	41637
Surr: 4-Terphenyl-d14	79.8	0	15-149		%Rec	1	12/10/2018 5:21:15 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	4800	35	200		µg/L	200	11/20/2018 5:07:00 PM	R55795
Toluene	21	3.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Ethylbenzene	200	4.5	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Methyl tert-butyl ether (MTBE)	120	9.1	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2,4-Trimethylbenzene	ND	5.1	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,3,5-Trimethylbenzene	ND	4.6	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Naphthalene	ND	5.8	40		µg/L	20	11/20/2018 5:31:00 PM	R55795
1-Methylnaphthalene	7.6	6.7	80	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
2-Methylnaphthalene	ND	6.9	80		µg/L	20	11/20/2018 5:31:00 PM	R55795
Acetone	ND	15	200		µg/L	20	11/20/2018 5:31:00 PM	R55795
Bromobenzene	ND	6.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Bromodichloromethane	ND	5.7	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Bromoform	ND	6.5	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Bromomethane	ND	5.5	60		µg/L	20	11/20/2018 5:31:00 PM	R55795
2-Butanone	ND	28	200		µg/L	20	11/20/2018 5:31:00 PM	R55795
Carbon disulfide	ND	7.7	200		µg/L	20	11/20/2018 5:31:00 PM	R55795
Carbon Tetrachloride	ND	2.7	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Chlorobenzene	ND	5.8	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Chloroethane	5.7	3.3	40	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
Chloroform	ND	4.7	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Chloromethane	ND	6.4	60		µg/L	20	11/20/2018 5:31:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	5.0	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
4-Chlorotoluene	ND	5.6	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
cis-1,2-DCE	9.3	7.5	20	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	11/20/2018 5:31:00 PM	R55795
Dibromochloromethane	ND	4.7	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Dibromomethane	ND	6.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1-Dichloroethane	76	3.5	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1-Dichloroethene	19	2.4	20	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2-Dichloropropane	ND	3.3	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,3-Dichloropropane	ND	5.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
2,2-Dichloropropane	ND	4.7	40		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1-Dichloropropene	ND	3.3	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Hexachlorobutadiene	ND	7.8	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
2-Hexanone	ND	18	200		µg/L	20	11/20/2018 5:31:00 PM	R55795
Isopropylbenzene	18	4.4	20	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
4-Isopropyltoluene	ND	4.8	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	11/20/2018 5:31:00 PM	R55795
Methylene Chloride	ND	4.1	60		µg/L	20	11/20/2018 5:31:00 PM	R55795
n-Butylbenzene	6.7	5.0	60	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
n-Propylbenzene	31	4.9	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
sec-Butylbenzene	4.2	4.0	20	J	µg/L	20	11/20/2018 5:31:00 PM	R55795
Styrene	ND	5.0	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
tert-Butylbenzene	ND	4.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	11/20/2018 5:31:00 PM	R55795
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
trans-1,2-DCE	ND	3.6	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Trichlorofluoromethane	ND	2.9	20		µg/L	20	11/20/2018 5:31:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-24
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 9:51:00 AM
Lab ID: 1811857-008
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	11	40		µg/L	20	11/20/2018 5:31:00 PM	R55795
Vinyl chloride	28	2.4	20		µg/L	20	11/20/2018 5:31:00 PM	R55795
Xylenes, Total	ND	13	30		µg/L	20	11/20/2018 5:31:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	99.2	0	70-130		%Rec	20	11/20/2018 5:31:00 PM	R55795
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	20	11/20/2018 5:31:00 PM	R55795
Surr: Dibromofluoromethane	95.9	0	70-130		%Rec	20	11/20/2018 5:31:00 PM	R55795
Surr: Toluene-d8	98.6	0	70-130		%Rec	20	11/20/2018 5:31:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0095		µg/L	1	11/20/2018 3:47:46 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 12:04:43 A	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 12:04:43 A	41593
Surr: DNOP	127	0	76.7-135		%Rec	1	11/20/2018 12:04:43 A	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	5.0	0.49	1.0		mg/L	20	11/20/2018 3:34:05 AM	W5574
Surr: BFB	90.9	0	72.8-125		%Rec	20	11/20/2018 3:34:05 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 2:26:07 PM	R55729
Chloride	630	25	25		mg/L	50	11/27/2018 8:49:22 PM	R55875
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 2:26:07 PM	R55729
Bromide	1.3	0.10	0.50		mg/L	5	11/16/2018 2:26:07 PM	R55729
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 2:26:07 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 2:26:07 PM	R55729
Sulfate	50	0.63	2.5		mg/L	5	11/16/2018 2:26:07 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.31	0.00099	0.0020		mg/L	1	12/21/2018 5:57:22 PM	C56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 5:57:22 PM	C56532
Calcium	120	0.39	5.0		mg/L	5	12/21/2018 5:59:35 PM	C56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 5:57:22 PM	C56532
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 5:57:22 PM	C56532
Iron	0.048	0.016	0.020		mg/L	1	12/21/2018 5:57:22 PM	C56532
Magnesium	20	0.25	1.0		mg/L	1	12/21/2018 5:57:22 PM	C56532
Manganese	2.9	0.0020	0.010	*	mg/L	5	12/21/2018 5:59:35 PM	C56532
Potassium	1.4	0.11	1.0		mg/L	1	12/21/2018 5:57:22 PM	C56532
Silver	0.0023	0.0018	0.0050	J	mg/L	1	12/21/2018 5:57:22 PM	C56532
Sodium	620	3.3	20		mg/L	20	12/21/2018 7:10:29 PM	C56532
Zinc	0.031	0.0021	0.010		mg/L	1	12/21/2018 5:57:22 PM	C56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.46	0.0010	0.0020		mg/L	1	11/26/2018 6:37:08 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:37:08 PM	41625
Chromium	0.10	0.0018	0.0060	*	mg/L	1	11/26/2018 6:37:08 PM	41625
Copper	0.017	0.0041	0.0060		mg/L	1	11/26/2018 6:37:08 PM	41625
Iron	2.9	0.051	0.10	*	mg/L	5	11/29/2018 9:45:53 AM	41625
Manganese	3.1	0.0055	0.010	*	mg/L	5	11/29/2018 9:45:53 AM	41625
Silver	0.0035	0.0012	0.0050	J	mg/L	1	11/26/2018 6:37:08 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.010	0.0033	0.010		mg/L	1	11/26/2018 6:37:08 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0043	0.00042	0.0010		mg/L	1	12/4/2018 4:11:01 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 4:11:01 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 4:11:01 PM	C56062
Uranium	0.047	0.00048	0.0025	*	mg/L	5	12/4/2018 4:23:04 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0058	0.00041	0.0010		mg/L	1	11/26/2018 7:24:50 PM	41625
Lead	0.0037	0.00023	0.00050		mg/L	1	11/26/2018 7:24:50 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:24:50 PM	41625
Uranium	0.055	0.00034	0.0025	*	mg/L	5	11/27/2018 5:46:40 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00010	0.000038	0.00020	J	mg/L	1	12/5/2018 3:15:49 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Benzoic acid	20	6.3	20	J	µg/L	1	12/10/2018 5:50:32 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Bis(2-ethylhexyl)phthalate	110	8.1	10		µg/L	1	12/10/2018 5:50:32 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 5:50:32 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 5:50:32 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 5:50:32 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 5:50:32 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 5:50:32 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 5:50:32 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Phenol	40	6.0	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 5:50:32 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 5:50:32 PM	41637
Surr: 2-Fluorophenol	45.7	0	15-74.1		%Rec	1	12/10/2018 5:50:32 PM	41637
Surr: Phenol-d5	43.4	0	15-59.8		%Rec	1	12/10/2018 5:50:32 PM	41637
Surr: 2,4,6-Tribromophenol	76.7	0	22.1-112		%Rec	1	12/10/2018 5:50:32 PM	41637
Surr: Nitrobenzene-d5	54.4	0	33.2-94		%Rec	1	12/10/2018 5:50:32 PM	41637
Surr: 2-Fluorobiphenyl	64.3	0	34-90.9		%Rec	1	12/10/2018 5:50:32 PM	41637
Surr: 4-Terphenyl-d14	85.2	0	15-149		%Rec	1	12/10/2018 5:50:32 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1700	17	100		µg/L	100	11/20/2018 5:55:00 PM	R55795
Toluene	5.9	1.7	10	J	µg/L	10	11/20/2018 6:18:00 PM	R55795
Ethylbenzene	2.9	2.2	10	J	µg/L	10	11/20/2018 6:18:00 PM	R55795
Methyl tert-butyl ether (MTBE)	200	4.6	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2,4-Trimethylbenzene	ND	2.5	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,3,5-Trimethylbenzene	ND	2.3	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	1.9	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	2.3	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Naphthalene	ND	2.9	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
1-Methylnaphthalene	ND	3.4	40		µg/L	10	11/20/2018 6:18:00 PM	R55795
2-Methylnaphthalene	ND	3.5	40		µg/L	10	11/20/2018 6:18:00 PM	R55795
Acetone	ND	7.6	100		µg/L	10	11/20/2018 6:18:00 PM	R55795
Bromobenzene	ND	3.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Bromodichloromethane	ND	2.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Bromoform	ND	3.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Bromomethane	ND	2.7	30		µg/L	10	11/20/2018 6:18:00 PM	R55795
2-Butanone	ND	14	100		µg/L	10	11/20/2018 6:18:00 PM	R55795
Carbon disulfide	ND	3.9	100		µg/L	10	11/20/2018 6:18:00 PM	R55795
Carbon Tetrachloride	ND	1.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Chlorobenzene	ND	2.9	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Chloroethane	ND	1.6	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
Chloroform	ND	2.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Chloromethane	ND	3.2	30		µg/L	10	11/20/2018 6:18:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	2.5	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
4-Chlorotoluene	ND	2.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
cis-1,2-DCE	29	3.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
cis-1,3-Dichloropropene	ND	3.0	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	4.7	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
Dibromochloromethane	ND	2.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Dibromomethane	ND	3.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2-Dichlorobenzene	ND	3.1	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,3-Dichlorobenzene	ND	3.1	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,4-Dichlorobenzene	ND	2.9	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Dichlorodifluoromethane	ND	2.6	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1-Dichloroethane	130	1.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1-Dichloroethene	27	1.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2-Dichloropropane	ND	1.7	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,3-Dichloropropane	ND	2.7	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
2,2-Dichloropropane	ND	2.3	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1-Dichloropropene	ND	1.6	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Hexachlorobutadiene	ND	3.9	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
2-Hexanone	ND	9.1	100		µg/L	10	11/20/2018 6:18:00 PM	R55795
Isopropylbenzene	4.1	2.2	10	J	µg/L	10	11/20/2018 6:18:00 PM	R55795
4-Isopropyltoluene	ND	2.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
4-Methyl-2-pentanone	ND	4.5	100		µg/L	10	11/20/2018 6:18:00 PM	R55795
Methylene Chloride	ND	2.1	30		µg/L	10	11/20/2018 6:18:00 PM	R55795
n-Butylbenzene	ND	2.5	30		µg/L	10	11/20/2018 6:18:00 PM	R55795
n-Propylbenzene	ND	2.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
sec-Butylbenzene	ND	2.0	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Styrene	ND	2.5	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
tert-Butylbenzene	ND	2.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	2.5	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	3.3	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
Tetrachloroethene (PCE)	ND	1.5	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
trans-1,2-DCE	ND	1.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
trans-1,3-Dichloropropene	ND	2.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2,3-Trichlorobenzene	ND	2.8	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,2,4-Trichlorobenzene	ND	2.7	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1,1-Trichloroethane	2.0	1.6	10	J	µg/L	10	11/20/2018 6:18:00 PM	R55795
1,1,2-Trichloroethane	ND	2.3	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Trichloroethene (TCE)	6.8	2.6	10	J	µg/L	10	11/20/2018 6:18:00 PM	R55795
Trichlorofluoromethane	ND	1.4	10		µg/L	10	11/20/2018 6:18:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-25
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:12:00 AM
Lab ID: 1811857-009
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	5.7	20		µg/L	10	11/20/2018 6:18:00 PM	R55795
Vinyl chloride	ND	1.2	10		µg/L	10	11/20/2018 6:18:00 PM	R55795
Xylenes, Total	ND	6.4	15		µg/L	10	11/20/2018 6:18:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	10	11/20/2018 6:18:00 PM	R55795
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	10	11/20/2018 6:18:00 PM	R55795
Surr: Dibromofluoromethane	97.6	0	70-130		%Rec	10	11/20/2018 6:18:00 PM	R55795
Surr: Toluene-d8	98.1	0	70-130		%Rec	10	11/20/2018 6:18:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	0.0092	0.0048	0.0093	J	µg/L	1	11/20/2018 4:02:35 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 12:28:45 A	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 12:28:45 A	41593
Surr: DNOP	104	0	76.7-135		%Rec	1	11/20/2018 12:28:45 A	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.12	0.024	0.050		mg/L	1	11/20/2018 3:56:42 AM	W5574
Surr: BFB	93.8	0	72.8-125		%Rec	1	11/20/2018 3:56:42 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 2:50:55 PM	R5572
Chloride	810	25	25		mg/L	50	11/27/2018 9:01:47 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 2:50:55 PM	R5572
Bromide	1.5	0.10	0.50		mg/L	5	11/16/2018 2:50:55 PM	R5572
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 2:50:55 PM	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 2:50:55 PM	R5572
Sulfate	67	0.63	2.5		mg/L	5	11/16/2018 2:50:55 PM	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.14	0.00099	0.0020		mg/L	1	12/21/2018 6:01:43 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:01:43 PM	C5653
Calcium	140	0.39	5.0		mg/L	5	12/21/2018 6:03:59 PM	C5653
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:01:43 PM	C5653
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 6:01:43 PM	C5653
Iron	0.019	0.016	0.020	J	mg/L	1	12/21/2018 6:01:43 PM	C5653
Magnesium	28	0.25	1.0		mg/L	1	12/21/2018 6:01:43 PM	C5653
Manganese	0.051	0.00039	0.0020	*	mg/L	1	12/21/2018 6:01:43 PM	C5653
Potassium	1.4	0.11	1.0		mg/L	1	12/21/2018 6:01:43 PM	C5653
Silver	0.0033	0.0018	0.0050	J	mg/L	1	12/21/2018 6:01:43 PM	C5653
Sodium	530	1.6	10		mg/L	10	12/21/2018 7:12:47 PM	C5653
Zinc	0.020	0.0021	0.010		mg/L	1	12/21/2018 6:01:43 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.21	0.0010	0.0020		mg/L	1	11/26/2018 6:45:23 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:45:23 PM	41625
Chromium	0.0019	0.0018	0.0060	J	mg/L	1	11/26/2018 6:45:23 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:45:23 PM	41625
Iron	4.1	0.051	0.10	*	mg/L	5	11/29/2018 10:10:27 A	41625
Manganese	0.16	0.0011	0.0020	*	mg/L	1	11/26/2018 6:45:23 PM	41625
Silver	0.0038	0.0012	0.0050	J	mg/L	1	11/26/2018 6:45:23 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.013	0.0033	0.010		mg/L	1	11/26/2018 6:45:23 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00062	0.00042	0.0010	J	mg/L	1	12/4/2018 4:13:26 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 4:13:26 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 4:13:26 PM	C56062
Uranium	0.035	0.00048	0.0025	*	mg/L	5	12/4/2018 4:25:29 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0023	0.00041	0.0010		mg/L	1	11/26/2018 7:26:46 PM	41625
Lead	0.0046	0.00023	0.00050		mg/L	1	11/26/2018 7:26:46 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:26:46 PM	41625
Uranium	0.042	0.00034	0.0025	*	mg/L	5	11/27/2018 5:48:36 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000062	0.000038	0.00020	J	mg/L	1	12/5/2018 3:18:02 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Acenaphthylene	ND	620	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Aniline	ND	620	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Anthracene	ND	570	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Azobenzene	ND	670	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benz(a)anthracene	ND	530	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzo(a)pyrene	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzo(b)fluoranthene	ND	710	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzo(g,h,i)perylene	ND	570	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzo(k)fluoranthene	ND	640	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzoic acid	ND	630	2000		µg/L	100	12/10/2018 6:19:46 PM	41637
Benzyl alcohol	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Bis(2-chloroethoxy)methane	ND	610	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Bis(2-chloroethyl)ether	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Bis(2-chloroisopropyl)ether	ND	490	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Bis(2-ethylhexyl)phthalate	ND	810	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
4-Bromophenyl phenyl ether	ND	690	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Butyl benzyl phthalate	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Carbazole	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
4-Chloro-3-methylphenol	ND	560	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
4-Chloroaniline	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Chloronaphthalene	ND	610	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Chlorophenol	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	720	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Chrysene	ND	680	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Di-n-butyl phthalate	ND	680	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Di-n-octyl phthalate	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Dibenz(a,h)anthracene	ND	560	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Dibenzofuran	ND	690	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
1,2-Dichlorobenzene	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
1,3-Dichlorobenzene	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
1,4-Dichlorobenzene	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
3,3´-Dichlorobenzidine	ND	680	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Diethyl phthalate	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Dimethyl phthalate	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4-Dichlorophenol	ND	580	2000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4-Dimethylphenol	ND	590	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
4,6-Dinitro-2-methylphenol	ND	540	2000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4-Dinitrophenol	ND	370	2000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4-Dinitrotoluene	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,6-Dinitrotoluene	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Fluoranthene	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Fluorene	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Hexachlorobenzene	ND	620	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Hexachlorobutadiene	ND	640	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Hexachlorocyclopentadiene	ND	390	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Hexachloroethane	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Indeno(1,2,3-cd)pyrene	ND	700	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Isophorone	ND	620	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
1-Methylnaphthalene	ND	700	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Methylnaphthalene	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Methylphenol	ND	630	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
3+4-Methylphenol	ND	540	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
N-Nitrosodi-n-propylamine	ND	610	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
N-Nitrosodimethylamine	ND	690	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
N-Nitrosodiphenylamine	ND	670	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Naphthalene	ND	500	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Nitroaniline	ND	590	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
3-Nitroaniline	ND	680	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
4-Nitroaniline	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Nitrobenzene	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2-Nitrophenol	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	560	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Pentachlorophenol	ND	530	2000		µg/L	100	12/10/2018 6:19:46 PM	41637
Phenanthrene	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Phenol	ND	600	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Pyrene	ND	650	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Pyridine	ND	540	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
1,2,4-Trichlorobenzene	ND	640	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4,5-Trichlorophenol	ND	580	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
2,4,6-Trichlorophenol	ND	640	1000		µg/L	100	12/10/2018 6:19:46 PM	41637
Surr: 2-Fluorophenol	0	0	15-74.1	S	%Rec	100	12/10/2018 6:19:46 PM	41637
Surr: Phenol-d5	0	0	15-59.8	S	%Rec	100	12/10/2018 6:19:46 PM	41637
Surr: 2,4,6-Tribromophenol	0	0	22.1-112	S	%Rec	100	12/10/2018 6:19:46 PM	41637
Surr: Nitrobenzene-d5	0	0	33.2-94	S	%Rec	100	12/10/2018 6:19:46 PM	41637
Surr: 2-Fluorobiphenyl	0	0	34-90.9	S	%Rec	100	12/10/2018 6:19:46 PM	41637
Surr: 4-Terphenyl-d14	0	0	15-149	S	%Rec	100	12/10/2018 6:19:46 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	1.1	0.17	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Methyl tert-butyl ether (MTBE)	88	0.46	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2-Dichloroethane (EDC)	27	0.19	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 6:42:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 6:42:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 6:42:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Chloroform	0.45	0.24	1.0	J	µg/L	1	11/20/2018 6:42:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 6:42:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
cis-1,2-DCE	1.7	0.38	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1-Dichloroethane	45	0.18	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1-Dichloroethene	69	0.12	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 6:42:00 PM	R55795
Isopropylbenzene	0.28	0.22	1.0	J	µg/L	1	11/20/2018 6:42:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 6:42:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1,1-Trichloroethane	4.5	0.16	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
1,1,2-Trichloroethane	2.6	0.23	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Trichloroethene (TCE)	4.8	0.26	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-31
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:32:00 AM
Lab ID: 1811857-010
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 6:42:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 6:42:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	11/20/2018 6:42:00 PM	R55795
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/20/2018 6:42:00 PM	R55795
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	11/20/2018 6:42:00 PM	R55795
Surr: Toluene-d8	96.3	0	70-130		%Rec	1	11/20/2018 6:42:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	11/20/2018 4:32:19 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 12:52:45 A	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 12:52:45 A	41593
Surr: DNOP	106	0	76.7-135		%Rec	1	11/20/2018 12:52:45 A	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/20/2018 4:19:22 AM	W5574
Surr: BFB	87.5	0	72.8-125		%Rec	1	11/20/2018 4:19:22 AM	W5574
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	11/16/2018 3:15:45 PM	R5572
Chloride	2700	250	250		mg/L	500	11/27/2018 9:14:11 PM	R5587
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/16/2018 3:28:10 PM	R5572
Bromide	14	0.10	0.50		mg/L	5	11/16/2018 3:15:45 PM	R5572
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 3:15:45 PM	R5572
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 3:15:45 PM	R5572
Sulfate	610	2.5	10		mg/L	20	11/16/2018 3:28:10 PM	R5572
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.049	0.00099	0.0020		mg/L	1	12/21/2018 6:12:49 PM	C5653
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:12:49 PM	C5653
Calcium	230	0.39	5.0		mg/L	5	12/21/2018 6:15:15 PM	C5653
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:12:49 PM	C5653
Copper	0.0032	0.0032	0.0060	J	mg/L	1	12/21/2018 6:12:49 PM	C5653
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 6:12:49 PM	C5653
Magnesium	42	0.25	1.0		mg/L	1	12/21/2018 6:12:49 PM	C5653
Manganese	0.0031	0.00039	0.0020		mg/L	1	12/21/2018 6:12:49 PM	C5653
Potassium	4.9	0.11	1.0		mg/L	1	12/21/2018 6:12:49 PM	C5653
Silver	0.0054	0.0018	0.0050		mg/L	1	12/21/2018 6:12:49 PM	C5653
Sodium	1900	8.2	50		mg/L	50	12/21/2018 7:15:08 PM	C5653
Zinc	0.025	0.0021	0.010		mg/L	1	12/21/2018 6:12:49 PM	C5653
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.072	0.0010	0.0020		mg/L	1	11/26/2018 6:47:25 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:47:25 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:47:25 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:47:25 PM	41625
Iron	1.2	0.051	0.10	*	mg/L	5	11/29/2018 10:12:34 A	41625
Manganese	0.025	0.0011	0.0020		mg/L	1	11/26/2018 6:47:25 PM	41625
Silver	0.0067	0.0012	0.0050		mg/L	1	11/26/2018 6:47:25 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0055	0.0033	0.010	J	mg/L	1	11/26/2018 6:47:25 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0014	0.00042	0.0010		mg/L	1	12/4/2018 4:15:49 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 4:15:49 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 4:15:49 PM	C56062
Uranium	0.039	0.00048	0.0025	*	mg/L	5	12/4/2018 4:32:45 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0037	0.00041	0.0010		mg/L	1	11/26/2018 7:28:43 PM	41625
Lead	0.0016	0.00023	0.00050		mg/L	1	11/26/2018 7:28:43 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:28:43 PM	41625
Uranium	0.046	0.00034	0.0025	*	mg/L	5	11/27/2018 5:50:33 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000042	0.000038	0.00020	J	mg/L	1	12/5/2018 3:20:15 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 6:48:46 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 6:48:46 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 6:48:46 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 6:48:46 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 6:48:46 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 6:48:46 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 6:48:46 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 6:48:46 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 6:48:46 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 6:48:46 PM	41637
Surr: 2-Fluorophenol	28.4	0	15-74.1		%Rec	1	12/10/2018 6:48:46 PM	41637
Surr: Phenol-d5	24.0	0	15-59.8		%Rec	1	12/10/2018 6:48:46 PM	41637
Surr: 2,4,6-Tribromophenol	61.1	0	22.1-112		%Rec	1	12/10/2018 6:48:46 PM	41637
Surr: Nitrobenzene-d5	55.9	0	33.2-94		%Rec	1	12/10/2018 6:48:46 PM	41637
Surr: 2-Fluorobiphenyl	48.2	0	34-90.9		%Rec	1	12/10/2018 6:48:46 PM	41637
Surr: 4-Terphenyl-d14	139	0	15-149		%Rec	1	12/10/2018 6:48:46 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2-Dichloroethane (EDC)	0.24	0.19	1.0	J	µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 7:06:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 7:06:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 7:06:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 7:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1-Dichloroethane	0.67	0.18	1.0	J	µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 7:06:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 7:06:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-40
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 10:55:00 AM
Lab ID: 1811857-011
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 7:06:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 7:06:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	11/20/2018 7:06:00 PM	R55795
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/20/2018 7:06:00 PM	R55795
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	11/20/2018 7:06:00 PM	R55795
Surr: Toluene-d8	97.7	0	70-130		%Rec	1	11/20/2018 7:06:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0049	0.0096		µg/L	1	11/20/2018 4:47:12 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 1:16:51 AM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 1:16:51 AM	41593
Surr: DNOP	108	0	76.7-135		%Rec	1	11/20/2018 1:16:51 AM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050	P	mg/L	1	11/26/2018 9:54:04 AM	G55859
Surr: BFB	81.7	0	72.8-125	P	%Rec	1	11/26/2018 9:54:04 AM	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.83	0.50	0.50		mg/L	5	11/16/2018 3:40:35 PM	R55729
Chloride	3100	250	250		mg/L	500	11/27/2018 9:26:36 PM	R55875
Nitrogen, Nitrite (As N)	ND	0.10	2.0		mg/L	20	11/16/2018 3:53:00 PM	R55729
Bromide	1.5	0.10	0.50		mg/L	5	11/16/2018 3:40:35 PM	R55729
Nitrogen, Nitrate (As N)	0.64	0.25	0.50		mg/L	5	11/16/2018 3:40:35 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 3:40:35 PM	R55729
Sulfate	270	2.5	10		mg/L	20	11/16/2018 3:53:00 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.063	0.00099	0.0020		mg/L	1	12/21/2018 6:17:24 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:17:24 PM	D56532
Calcium	240	0.39	5.0		mg/L	5	12/21/2018 6:19:37 PM	D56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:17:24 PM	D56532
Copper	0.0047	0.0032	0.0060	J	mg/L	1	12/21/2018 6:17:24 PM	D56532
Iron	0.16	0.016	0.020		mg/L	1	12/21/2018 6:17:24 PM	D56532
Magnesium	38	0.25	1.0		mg/L	1	12/21/2018 6:17:24 PM	D56532
Manganese	0.21	0.00039	0.0020	*	mg/L	1	12/21/2018 6:17:24 PM	D56532
Potassium	10	0.11	1.0		mg/L	1	12/21/2018 6:17:24 PM	D56532
Silver	0.0052	0.0018	0.0050		mg/L	1	12/21/2018 6:17:24 PM	D56532
Sodium	2300	8.2	50		mg/L	50	12/21/2018 7:17:27 PM	D56532
Zinc	0.026	0.0021	0.010		mg/L	1	12/21/2018 6:17:24 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.076	0.0010	0.0020		mg/L	1	11/26/2018 6:49:30 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:49:30 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:49:30 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:49:30 PM	41625
Iron	1.2	0.051	0.10	*	mg/L	5	11/29/2018 10:14:53 A	41625
Manganese	0.42	0.0011	0.0020	*	mg/L	1	11/26/2018 6:49:30 PM	41625
Silver	0.0067	0.0012	0.0050		mg/L	1	11/26/2018 6:49:30 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0072	0.0033	0.010	J	mg/L	1	11/26/2018 6:49:30 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0017	0.00042	0.0010		mg/L	1	12/4/2018 3:41:55 PM	C56062
Lead	ND	0.00087	0.0025		mg/L	5	12/4/2018 4:35:10 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:41:55 PM	C56062
Uranium	0.031	0.00048	0.0025	*	mg/L	5	12/4/2018 4:35:10 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0039	0.00041	0.0010		mg/L	1	11/26/2018 7:30:40 PM	41625
Lead	0.0015	0.00023	0.00050		mg/L	1	11/26/2018 7:30:40 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:30:40 PM	41625
Uranium	0.036	0.00034	0.0025	*	mg/L	5	11/27/2018 5:52:30 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000040	0.000038	0.00020	J	mg/L	1	12/5/2018 3:22:29 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 7:17:44 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 7:17:44 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 7:17:44 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 7:17:44 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 7:17:44 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 7:17:44 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 7:17:44 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 7:17:44 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 7:17:44 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 7:17:44 PM	41637
Surr: 2-Fluorophenol	35.9	0	15-74.1		%Rec	1	12/10/2018 7:17:44 PM	41637
Surr: Phenol-d5	32.8	0	15-59.8		%Rec	1	12/10/2018 7:17:44 PM	41637
Surr: 2,4,6-Tribromophenol	66.2	0	22.1-112		%Rec	1	12/10/2018 7:17:44 PM	41637
Surr: Nitrobenzene-d5	53.4	0	33.2-94		%Rec	1	12/10/2018 7:17:44 PM	41637
Surr: 2-Fluorobiphenyl	51.5	0	34-90.9		%Rec	1	12/10/2018 7:17:44 PM	41637
Surr: 4-Terphenyl-d14	59.9	0	15-149		%Rec	1	12/10/2018 7:17:44 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Methyl tert-butyl ether (MTBE)	21	0.46	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2-Dichloroethane (EDC)	0.47	0.19	1.0	J	µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 7:30:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 7:30:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 7:30:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 7:30:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1-Dichloroethane	2.0	0.18	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1-Dichloroethene	0.41	0.12	1.0	J	µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 7:30:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 7:30:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-27
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:16:00 AM
Lab ID: 1811857-012
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 7:30:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 7:30:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	115	0	70-130		%Rec	1	11/20/2018 7:30:00 PM	R55795
Surr: 4-Bromofluorobenzene	100	0	70-130		%Rec	1	11/20/2018 7:30:00 PM	R55795
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	11/20/2018 7:30:00 PM	R55795
Surr: Toluene-d8	96.0	0	70-130		%Rec	1	11/20/2018 7:30:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0094		µg/L	1	11/20/2018 5:02:01 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 1:40:55 AM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 1:40:55 AM	41593
Surr: DNOP	103	0	76.7-135		%Rec	1	11/20/2018 1:40:55 AM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.040	0.024	0.050	J	mg/L	1	11/26/2018 11:02:15 A	G55859
Surr: BFB	86.5	0	72.8-125		%Rec	1	11/26/2018 11:02:15 A	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.2	0.50	0.50		mg/L	5	11/16/2018 4:30:13 PM	R55729
Chloride	460	25	25		mg/L	50	11/27/2018 9:39:00 PM	R55875
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 4:30:13 PM	R55729
Bromide	0.94	0.10	0.50		mg/L	5	11/16/2018 4:30:13 PM	R55729
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 4:30:13 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 4:30:13 PM	R55729
Sulfate	490	2.5	10		mg/L	20	11/16/2018 4:42:38 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.030	0.00099	0.0020		mg/L	1	12/21/2018 6:21:49 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:21:49 PM	D56532
Calcium	63	0.078	1.0		mg/L	1	12/21/2018 6:21:49 PM	D56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:21:49 PM	D56532
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 6:21:49 PM	D56532
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 6:21:49 PM	D56532
Magnesium	11	0.25	1.0		mg/L	1	12/21/2018 6:21:49 PM	D56532
Manganese	0.013	0.00039	0.0020		mg/L	1	12/21/2018 6:21:49 PM	D56532
Potassium	0.27	0.11	1.0	J	mg/L	1	12/21/2018 6:21:49 PM	D56532
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 6:21:49 PM	D56532
Sodium	760	3.3	20		mg/L	20	12/21/2018 7:19:40 PM	D56532
Zinc	0.035	0.0021	0.010		mg/L	1	12/21/2018 6:21:49 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.048	0.0010	0.0020		mg/L	1	11/26/2018 6:51:28 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:51:28 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:51:28 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:51:28 PM	41625
Iron	0.75	0.010	0.020	*	mg/L	1	11/26/2018 6:51:28 PM	41625
Manganese	0.19	0.0011	0.0020	*	mg/L	1	11/26/2018 6:51:28 PM	41625
Silver	0.0019	0.0012	0.0050	J	mg/L	1	11/26/2018 6:51:28 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0048	0.0033	0.010	J	mg/L	1	11/26/2018 6:51:28 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00056	0.00042	0.0010	J	mg/L	1	12/4/2018 3:44:20 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:44:20 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:44:20 PM	C56062
Uranium	0.025	0.00048	0.0025		mg/L	5	12/4/2018 4:37:35 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	11/26/2018 7:32:37 PM	41625
Lead	0.00076	0.00023	0.00050		mg/L	1	11/26/2018 7:32:37 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:32:37 PM	41625
Uranium	0.028	0.00034	0.0025		mg/L	5	11/27/2018 5:54:27 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/5/2018 3:24:43 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 7:46:56 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 7:46:56 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 7:46:56 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 7:46:56 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 7:46:56 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 7:46:56 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 7:46:56 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 7:46:56 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 7:46:56 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 7:46:56 PM	41637
Surr: 2-Fluorophenol	40.3	0	15-74.1		%Rec	1	12/10/2018 7:46:56 PM	41637
Surr: Phenol-d5	32.0	0	15-59.8		%Rec	1	12/10/2018 7:46:56 PM	41637
Surr: 2,4,6-Tribromophenol	74.2	0	22.1-112		%Rec	1	12/10/2018 7:46:56 PM	41637
Surr: Nitrobenzene-d5	60.2	0	33.2-94		%Rec	1	12/10/2018 7:46:56 PM	41637
Surr: 2-Fluorobiphenyl	54.4	0	34-90.9		%Rec	1	12/10/2018 7:46:56 PM	41637
Surr: 4-Terphenyl-d14	48.9	0	15-149		%Rec	1	12/10/2018 7:46:56 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Toluene	ND	0.17	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Ethylbenzene	ND	0.22	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Methyl tert-butyl ether (MTBE)	2.1	0.46	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2-Dichloroethane (EDC)	3.0	0.19	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Naphthalene	ND	0.29	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Acetone	ND	0.76	10	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Bromobenzene	ND	0.32	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Bromoform	ND	0.32	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Bromomethane	ND	0.27	3.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
2-Butanone	ND	1.4	10	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Carbon disulfide	ND	0.39	10	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Chlorobenzene	ND	0.29	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Chloroethane	ND	0.16	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Chloroform	ND	0.24	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Chloromethane	ND	0.32	3.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
cis-1,2-DCE	5.3	0.38	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Dibromomethane	ND	0.32	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1-Dichloroethane	65	0.18	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1-Dichloroethene	5.1	0.12	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
2-Hexanone	ND	0.91	10	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Methylene Chloride	ND	0.21	3.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Styrene	ND	0.25	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Tetrachloroethene (PCE)	0.17	0.15	1.0	JP	µg/L	1	11/20/2018 7:54:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1,1-Trichloroethane	0.80	0.16	1.0	JP	µg/L	1	11/20/2018 7:54:00 PM	R55795
1,1,2-Trichloroethane	0.41	0.23	1.0	JP	µg/L	1	11/20/2018 7:54:00 PM	R55795
Trichloroethene (TCE)	3.8	0.26	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-30
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:37:00 AM
Lab ID: 1811857-013
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Vinyl chloride	ND	0.12	1.0	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Xylenes, Total	ND	0.64	1.5	P	µg/L	1	11/20/2018 7:54:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	116	0	70-130	P	%Rec	1	11/20/2018 7:54:00 PM	R55795
Surr: 4-Bromofluorobenzene	105	0	70-130	P	%Rec	1	11/20/2018 7:54:00 PM	R55795
Surr: Dibromofluoromethane	107	0	70-130	P	%Rec	1	11/20/2018 7:54:00 PM	R55795
Surr: Toluene-d8	97.3	0	70-130	P	%Rec	1	11/20/2018 7:54:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0048	0.0093		µg/L	1	11/20/2018 5:16:53 AM	41603
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 2:05:01 AM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 2:05:01 AM	41593
Surr: DNOP	104	0	76.7-135		%Rec	1	11/20/2018 2:05:01 AM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	0.041	0.024	0.050	J	mg/L	1	11/26/2018 11:25:03 A	G55859
Surr: BFB	84.4	0	72.8-125		%Rec	1	11/26/2018 11:25:03 A	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.2	0.50	0.50		mg/L	5	11/16/2018 4:55:02 PM	R55729
Chloride	430	25	25		mg/L	50	11/27/2018 9:51:24 PM	R55875
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 4:55:02 PM	R55729
Bromide	0.94	0.10	0.50		mg/L	5	11/16/2018 4:55:02 PM	R55729
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 4:55:02 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 4:55:02 PM	R55729
Sulfate	500	2.5	10		mg/L	20	11/16/2018 5:07:26 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.030	0.00099	0.0020		mg/L	1	12/21/2018 6:26:04 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:26:04 PM	D56532
Calcium	64	0.078	1.0		mg/L	1	12/21/2018 6:26:04 PM	D56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:26:04 PM	D56532
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 6:26:04 PM	D56532
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 6:26:04 PM	D56532
Magnesium	12	0.25	1.0		mg/L	1	12/21/2018 6:26:04 PM	D56532
Manganese	0.0061	0.00039	0.0020		mg/L	1	12/21/2018 6:26:04 PM	D56532
Potassium	0.27	0.11	1.0	J	mg/L	1	12/21/2018 6:26:04 PM	D56532
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 6:26:04 PM	D56532
Sodium	780	3.3	20		mg/L	20	12/21/2018 7:21:55 PM	D56532
Zinc	0.023	0.0021	0.010		mg/L	1	12/21/2018 6:26:04 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.072	0.0010	0.0020		mg/L	1	11/26/2018 6:53:26 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:53:26 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:53:26 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:53:26 PM	41625
Iron	1.4	0.051	0.10	*	mg/L	5	11/29/2018 10:17:09 A	41625
Manganese	0.32	0.0011	0.0020	*	mg/L	1	11/26/2018 6:53:26 PM	41625
Silver	0.0019	0.0012	0.0050	J	mg/L	1	11/26/2018 6:53:26 PM	41625

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Zinc	0.0068	0.0033	0.010	J	mg/L	1	11/26/2018 6:53:26 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00057	0.00042	0.0010	J	mg/L	1	12/4/2018 3:46:45 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:46:45 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:46:45 PM	C56062
Uranium	0.025	0.00048	0.0025		mg/L	5	12/4/2018 4:40:00 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0012	0.00041	0.0010		mg/L	1	11/26/2018 7:34:34 PM	41625
Lead	0.0014	0.00023	0.00050		mg/L	1	11/26/2018 7:34:34 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:34:34 PM	41625
Uranium	0.029	0.00034	0.0025		mg/L	5	11/27/2018 6:00:28 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/5/2018 3:26:58 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 8:15:56 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 8:15:56 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 8:15:56 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 8:15:56 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 8:15:56 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 8:15:56 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 8:15:56 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 8:15:56 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Phenol	ND	6.0	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 8:15:56 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 8:15:56 PM	41637
Surr: 2-Fluorophenol	26.5	0	15-74.1		%Rec	1	12/10/2018 8:15:56 PM	41637
Surr: Phenol-d5	21.8	0	15-59.8		%Rec	1	12/10/2018 8:15:56 PM	41637
Surr: 2,4,6-Tribromophenol	56.7	0	22.1-112		%Rec	1	12/10/2018 8:15:56 PM	41637
Surr: Nitrobenzene-d5	40.4	0	33.2-94		%Rec	1	12/10/2018 8:15:56 PM	41637
Surr: 2-Fluorobiphenyl	34.9	0	34-90.9		%Rec	1	12/10/2018 8:15:56 PM	41637
Surr: 4-Terphenyl-d14	45.3	0	15-149		%Rec	1	12/10/2018 8:15:56 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Methyl tert-butyl ether (MTBE)	1.6	0.46	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2-Dichloroethane (EDC)	2.5	0.19	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 8:17:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 8:17:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 8:17:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 8:17:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
cis-1,2-DCE	4.6	0.38	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1-Dichloroethane	54	0.18	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1-Dichloroethene	4.5	0.12	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 8:17:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 8:17:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Tetrachloroethene (PCE)	0.16	0.15	1.0	J	µg/L	1	11/20/2018 8:17:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1,1-Trichloroethane	0.72	0.16	1.0	J	µg/L	1	11/20/2018 8:17:00 PM	R55795
1,1,2-Trichloroethane	0.36	0.23	1.0	J	µg/L	1	11/20/2018 8:17:00 PM	R55795
Trichloroethene (TCE)	3.2	0.26	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Duplicate
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 11:55:00 AM
Lab ID: 1811857-014
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 8:17:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 8:17:00 PM	R55795
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	11/20/2018 8:17:00 PM	R55795
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	1	11/20/2018 8:17:00 PM	R55795
Surr: Dibromofluoromethane	96.3	0	70-130		%Rec	1	11/20/2018 8:17:00 PM	R55795
Surr: Toluene-d8	96.7	0	70-130		%Rec	1	11/20/2018 8:17:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015 **Matrix:** AQUEOUS **Received Date:** 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 2:28:57 AM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 2:28:57 AM	41593
Surr: DNOP	123	0	76.7-135		%Rec	1	11/20/2018 2:28:57 AM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/26/2018 11:47:51 A	G55859
Surr: BFB	85.4	0	72.8-125		%Rec	1	11/26/2018 11:47:51 A	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	0.80	0.50	0.50		mg/L	5	11/16/2018 5:19:50 PM	R55729
Chloride	210	10	10		mg/L	20	11/16/2018 5:32:15 PM	R55729
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 5:19:50 PM	R55729
Bromide	0.85	0.10	0.50		mg/L	5	11/16/2018 5:19:50 PM	R55729
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	11/16/2018 5:19:50 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 5:19:50 PM	R55729
Sulfate	630	2.5	10		mg/L	20	11/16/2018 5:32:15 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.028	0.00099	0.0020		mg/L	1	12/21/2018 6:30:18 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:30:18 PM	D56532
Calcium	80	0.078	1.0		mg/L	1	12/21/2018 6:30:18 PM	D56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:30:18 PM	D56532
Copper	0.0049	0.0032	0.0060	J	mg/L	1	12/21/2018 6:30:18 PM	D56532
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 6:30:18 PM	D56532
Magnesium	11	0.25	1.0		mg/L	1	12/21/2018 6:30:18 PM	D56532
Manganese	0.48	0.00039	0.0020	*	mg/L	1	12/21/2018 6:30:18 PM	D56532
Potassium	0.41	0.11	1.0	J	mg/L	1	12/21/2018 6:30:18 PM	D56532
Silver	0.0021	0.0018	0.0050	J	mg/L	1	12/21/2018 6:30:18 PM	D56532
Sodium	520	1.6	10		mg/L	10	12/21/2018 7:24:13 PM	D56532
Zinc	0.030	0.0021	0.010		mg/L	1	12/21/2018 6:30:18 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.037	0.0010	0.0020		mg/L	1	11/26/2018 6:55:24 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:55:24 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:55:24 PM	41625
Copper	0.0051	0.0041	0.0060	J	mg/L	1	11/26/2018 6:55:24 PM	41625
Iron	0.24	0.010	0.020		mg/L	1	11/26/2018 6:55:24 PM	41625
Manganese	0.47	0.0011	0.0020	*	mg/L	1	11/26/2018 6:55:24 PM	41625
Silver	0.0023	0.0012	0.0050	J	mg/L	1	11/26/2018 6:55:24 PM	41625
Zinc	0.0034	0.0033	0.010	J	mg/L	1	11/26/2018 6:55:24 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0010	0.00042	0.0010		mg/L	1	12/4/2018 3:49:10 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:49:10 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:49:10 PM	C56062
Uranium	0.0077	0.000096	0.00050		mg/L	1	12/4/2018 3:49:10 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0015	0.00041	0.0010		mg/L	1	11/26/2018 7:36:31 PM	41625
Lead	0.00023	0.00023	0.00050	J	mg/L	1	11/26/2018 7:36:31 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:36:31 PM	41625
Uranium	0.0081	0.000068	0.00050		mg/L	1	11/26/2018 7:36:31 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/5/2018 3:29:13 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 8:45:20 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 8:45:20 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 8:45:20 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 8:45:20 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 8:45:20 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 8:45:20 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 8:45:20 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 8:45:20 PM	41637
Surr: 2-Fluorophenol	29.3	0	15-74.1		%Rec	1	12/10/2018 8:45:20 PM	41637
Surr: Phenol-d5	17.8	0	15-59.8		%Rec	1	12/10/2018 8:45:20 PM	41637
Surr: 2,4,6-Tribromophenol	60.7	0	22.1-112		%Rec	1	12/10/2018 8:45:20 PM	41637
Surr: Nitrobenzene-d5	60.2	0	33.2-94		%Rec	1	12/10/2018 8:45:20 PM	41637
Surr: 2-Fluorobiphenyl	54.6	0	34-90.9		%Rec	1	12/10/2018 8:45:20 PM	41637
Surr: 4-Terphenyl-d14	44.9	0	15-149		%Rec	1	12/10/2018 8:45:20 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Methyl tert-butyl ether (MTBE)	3.7	0.46	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 8:41:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 8:41:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 8:41:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 8:41:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 8:41:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 8:41:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 8:41:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-29
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:10:00 PM
Lab ID: 1811857-015
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	11/20/2018 8:41:00 PM	R55795
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	11/20/2018 8:41:00 PM	R55795
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	11/20/2018 8:41:00 PM	R55795
Surr: Toluene-d8	98.4	0	70-130		%Rec	1	11/20/2018 8:41:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	ND	0.63	1.0		mg/L	1	11/20/2018 2:53:06 AM	41593
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	11/20/2018 2:53:06 AM	41593
Surr: DNOP	127	0	76.7-135		%Rec	1	11/20/2018 2:53:06 AM	41593
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	11/26/2018 12:10:39 P	G55859
Surr: BFB	84.2	0	72.8-125		%Rec	1	11/26/2018 12:10:39 P	G55859
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	1.4	0.50	0.50		mg/L	5	11/16/2018 5:44:40 PM	R55729
Chloride	400	25	25		mg/L	50	11/27/2018 10:03:48 P	R55875
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	11/16/2018 5:44:40 PM	R55729
Bromide	2.1	0.10	0.50		mg/L	5	11/16/2018 5:44:40 PM	R55729
Nitrogen, Nitrate (As N)	1.7	0.25	0.50		mg/L	5	11/16/2018 5:44:40 PM	R55729
Phosphorus, Orthophosphate (As P)	ND	2.5	2.5		mg/L	5	11/16/2018 5:44:40 PM	R55729
Sulfate	180	0.63	2.5		mg/L	5	11/16/2018 5:44:40 PM	R55729
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.048	0.00099	0.0020		mg/L	1	12/21/2018 6:41:29 PM	D56532
Cadmium	ND	0.0010	0.0020		mg/L	1	12/21/2018 6:41:29 PM	D56532
Calcium	42	0.078	1.0		mg/L	1	12/21/2018 6:41:29 PM	D56532
Chromium	ND	0.0013	0.0060		mg/L	1	12/21/2018 6:41:29 PM	D56532
Copper	ND	0.0032	0.0060		mg/L	1	12/21/2018 6:41:29 PM	D56532
Iron	ND	0.016	0.020		mg/L	1	12/21/2018 6:41:29 PM	D56532
Magnesium	8.4	0.25	1.0		mg/L	1	12/21/2018 6:41:29 PM	D56532
Manganese	0.0011	0.00039	0.0020	J	mg/L	1	12/21/2018 6:41:29 PM	D56532
Potassium	2.0	0.11	1.0		mg/L	1	12/21/2018 6:41:29 PM	D56532
Silver	ND	0.0018	0.0050		mg/L	1	12/21/2018 6:41:29 PM	D56532
Sodium	570	1.6	10		mg/L	10	12/21/2018 7:26:27 PM	D56532
Zinc	0.016	0.0021	0.010		mg/L	1	12/21/2018 6:41:29 PM	D56532
EPA METHOD 200.7: TOTAL METALS							Analyst: **pmf**	
Barium	0.071	0.0010	0.0020		mg/L	1	11/26/2018 6:57:36 PM	41625
Cadmium	ND	0.00058	0.0020		mg/L	1	11/26/2018 6:57:36 PM	41625
Chromium	ND	0.0018	0.0060		mg/L	1	11/26/2018 6:57:36 PM	41625
Copper	ND	0.0041	0.0060		mg/L	1	11/26/2018 6:57:36 PM	41625
Iron	1.0	0.051	0.10	*	mg/L	5	11/29/2018 10:19:21 A	41625
Manganese	0.069	0.0011	0.0020	*	mg/L	1	11/26/2018 6:57:36 PM	41625
Silver	ND	0.0012	0.0050		mg/L	1	11/26/2018 6:57:36 PM	41625
Zinc	0.0061	0.0033	0.010	J	mg/L	1	11/26/2018 6:57:36 PM	41625
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.0012	0.00042	0.0010		mg/L	1	12/4/2018 3:51:35 PM	C56062
Lead	ND	0.00017	0.00050		mg/L	1	12/4/2018 3:51:35 PM	C56062
Selenium	ND	0.00076	0.0010		mg/L	1	12/4/2018 3:51:35 PM	C56062
Uranium	0.13	0.00096	0.0050	*	mg/L	10	12/4/2018 4:56:26 PM	C56062
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0017	0.00041	0.0010		mg/L	1	11/26/2018 7:38:28 PM	41625
Lead	0.00095	0.00023	0.00050		mg/L	1	11/26/2018 7:38:28 PM	41625
Selenium	ND	0.00098	0.0010		mg/L	1	11/26/2018 7:38:28 PM	41625
Uranium	0.14	0.00068	0.0050	*	mg/L	10	11/27/2018 6:02:24 PM	41625
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	ND	0.000038	0.00020		mg/L	1	12/5/2018 3:31:29 PM	41897
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Acenaphthylene	ND	6.2	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Aniline	ND	6.2	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Anthracene	ND	5.7	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Azobenzene	ND	6.7	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benz(a)anthracene	ND	5.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzo(a)pyrene	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzo(b)fluoranthene	ND	7.1	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzo(g,h,i)perylene	ND	5.7	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzo(k)fluoranthene	ND	6.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzoic acid	ND	6.3	20		µg/L	1	12/10/2018 9:14:19 PM	41637
Benzyl alcohol	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Bis(2-chloroethoxy)methane	ND	6.1	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Bis(2-chloroethyl)ether	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Bis(2-chloroisopropyl)ether	ND	4.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Bis(2-ethylhexyl)phthalate	ND	8.1	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Bromophenyl phenyl ether	ND	6.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Butyl benzyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Carbazole	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Chloro-3-methylphenol	ND	5.6	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Chloroaniline	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Chloronaphthalene	ND	6.1	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Chlorophenol	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Chlorophenyl phenyl ether	ND	7.2	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Chrysene	ND	6.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Di-n-butyl phthalate	ND	6.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Di-n-octyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Dibenz(a,h)anthracene	ND	5.6	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Dibenzofuran	ND	6.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
1,2-Dichlorobenzene	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
1,3-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
1,4-Dichlorobenzene	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
3,3´-Dichlorobenzidine	ND	6.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Diethyl phthalate	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Dimethyl phthalate	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4-Dichlorophenol	ND	5.8	20		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4-Dimethylphenol	ND	5.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4,6-Dinitro-2-methylphenol	ND	5.4	20		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4-Dinitrophenol	ND	3.7	20		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4-Dinitrotoluene	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2,6-Dinitrotoluene	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Fluoranthene	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Fluorene	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Hexachlorobenzene	ND	6.2	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Hexachlorobutadiene	ND	6.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Hexachlorocyclopentadiene	ND	3.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Hexachloroethane	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Indeno(1,2,3-cd)pyrene	ND	7.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Isophorone	ND	6.2	10		µg/L	1	12/10/2018 9:14:19 PM	41637
1-Methylnaphthalene	ND	7.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Methylnaphthalene	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Methylphenol	ND	6.3	10		µg/L	1	12/10/2018 9:14:19 PM	41637
3+4-Methylphenol	ND	5.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
N-Nitrosodi-n-propylamine	ND	6.1	10		µg/L	1	12/10/2018 9:14:19 PM	41637
N-Nitrosodimethylamine	ND	6.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
N-Nitrosodiphenylamine	ND	6.7	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Naphthalene	ND	5.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Nitroaniline	ND	5.9	10		µg/L	1	12/10/2018 9:14:19 PM	41637
3-Nitroaniline	ND	6.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Nitroaniline	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Nitrobenzene	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2-Nitrophenol	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
4-Nitrophenol	ND	5.6	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Pentachlorophenol	ND	5.3	20		µg/L	1	12/10/2018 9:14:19 PM	41637
Phenanthrene	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Phenol	ND	6.0	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Pyrene	ND	6.5	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Pyridine	ND	5.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
1,2,4-Trichlorobenzene	ND	6.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4,5-Trichlorophenol	ND	5.8	10		µg/L	1	12/10/2018 9:14:19 PM	41637
2,4,6-Trichlorophenol	ND	6.4	10		µg/L	1	12/10/2018 9:14:19 PM	41637
Surr: 2-Fluorophenol	45.5	0	15-74.1		%Rec	1	12/10/2018 9:14:19 PM	41637
Surr: Phenol-d5	32.9	0	15-59.8		%Rec	1	12/10/2018 9:14:19 PM	41637
Surr: 2,4,6-Tribromophenol	58.1	0	22.1-112		%Rec	1	12/10/2018 9:14:19 PM	41637
Surr: Nitrobenzene-d5	64.1	0	33.2-94		%Rec	1	12/10/2018 9:14:19 PM	41637
Surr: 2-Fluorobiphenyl	53.8	0	34-90.9		%Rec	1	12/10/2018 9:14:19 PM	41637
Surr: 4-Terphenyl-d14	50.7	0	15-149		%Rec	1	12/10/2018 9:14:19 PM	41637
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Toluene	ND	0.17	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Ethylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Methyl tert-butyl ether (MTBE)	2.8	0.46	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Naphthalene	ND	0.29	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Acetone	ND	0.76	10		µg/L	1	11/20/2018 9:05:00 PM	R55795
Bromobenzene	ND	0.32	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Bromodichloromethane	ND	0.28	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Bromoform	ND	0.32	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Bromomethane	ND	0.27	3.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
2-Butanone	ND	1.4	10		µg/L	1	11/20/2018 9:05:00 PM	R55795
Carbon disulfide	ND	0.39	10		µg/L	1	11/20/2018 9:05:00 PM	R55795
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Chlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Chloroethane	ND	0.16	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Chloroform	ND	0.24	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Chloromethane	ND	0.32	3.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Dibromochloromethane	ND	0.24	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Dibromomethane	ND	0.32	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
2-Hexanone	ND	0.91	10		µg/L	1	11/20/2018 9:05:00 PM	R55795
Isopropylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	11/20/2018 9:05:00 PM	R55795
Methylene Chloride	ND	0.21	3.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
n-Butylbenzene	ND	0.25	3.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
n-Propylbenzene	ND	0.24	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Styrene	ND	0.25	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Vinyl chloride	ND	0.12	1.0		µg/L	1	11/20/2018 9:05:00 PM	R55795
Xylenes, Total	ND	0.64	1.5		µg/L	1	11/20/2018 9:05:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: MKTF-28
Project: 4th QTR 2018 GW
Collection Date: 11/15/2018 12:30:00 PM
Lab ID: 1811857-016
Matrix: AQUEOUS
Received Date: 11/15/2018 3:43:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	11/20/2018 9:05:00 PM	R55795
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	11/20/2018 9:05:00 PM	R55795
Surr: Dibromofluoromethane	97.5	0	70-130		%Rec	1	11/20/2018 9:05:00 PM	R55795
Surr: Toluene-d8	93.0	0	70-130		%Rec	1	11/20/2018 9:05:00 PM	R55795

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	105	50	150			
Cadmium	0.0016	0.0020	0.002000	0	80.6	50	150			J
Calcium	0.53	1.0	0.5000	0	107	50	150			J
Chromium	0.0066	0.0060	0.006000	0	111	50	150			
Copper	0.0063	0.0060	0.006000	0	104	50	150			
Iron	0.018	0.020	0.02000	0	90.9	50	150			J
Magnesium	0.51	1.0	0.5000	0	102	50	150			J
Manganese	0.0020	0.0020	0.002000	0	101	50	150			
Potassium	0.52	1.0	0.5000	0	105	50	150			J
Silver	0.0047	0.0050	0.005000	0	94.3	50	150			J
Sodium	0.52	1.0	0.5000	0	104	50	150			J
Zinc	0.0062	0.010	0.005000	0	124	50	150			J

Sample ID **MB-D**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	99.4	50	150			J
Cadmium	0.0018	0.0020	0.002000	0	88.3	50	150			J
Calcium	0.52	1.0	0.5000	0	103	50	150			J
Chromium	0.0065	0.0060	0.006000	0	108	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LLLCS-D**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0072	0.0060	0.006000	0	119	50	150			
Iron	0.019	0.020	0.02000	0	95.2	50	150			J
Magnesium	0.51	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	103	50	150			
Potassium	0.53	1.0	0.5000	0	106	50	150			J
Silver	0.0048	0.0050	0.005000	0	96.8	50	150			J
Sodium	0.58	1.0	0.5000	0	116	50	150			J
Zinc	0.0057	0.010	0.005000	0	114	50	150			J

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891519** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.4	85	115			
Calcium	50	1.0	50.00	0	99.6	85	115			
Chromium	0.49	0.0060	0.5000	0	97.4	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	99.7	85	115			
Magnesium	49	1.0	50.00	0	98.0	85	115			
Manganese	0.49	0.0020	0.5000	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891552** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.093	0.0050	0.1000	0	92.9	85	115			
Sodium	50	1.0	50.00	0	99.7	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Sample ID **LCS-D**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891553** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.9	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	51	1.0	50.00	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Copper	0.49	0.0060	0.5000	0	97.8	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.095	0.0050	0.1000	0	95.2	85	115			
Sodium	52	1.0	50.00	0	104	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID **1811857-003GMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MKTF-44**	Batch ID: **D56532**	RunNo: **56532**
Prep Date:	Analysis Date: **12/21/2018**	SeqNo: **1891673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.03242	95.9	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.0	70	130			
Calcium	60	1.0	50.00	9.781	99.6	70	130			
Chromium	0.48	0.0060	0.5000	0.002677	95.8	70	130			
Copper	0.50	0.0060	0.5000	0.003871	98.5	70	130			
Iron	0.73	0.020	0.5000	0.1596	114	70	130			
Magnesium	48	1.0	50.00	0.5029	95.7	70	130			
Manganese	0.49	0.0020	0.5000	0.004933	96.0	70	130			
Potassium	48	1.0	50.00	1.169	94.5	70	130			
Silver	0.091	0.0050	0.1000	0	91.0	70	130			
Zinc	0.52	0.010	0.5000	0.01609	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**1811857-003GMSD**	SampType:	**MSD**	TestCode:	**EPA Method 200.7: Dissolved Metals**
Client ID:	**MKTF-44**	Batch ID:	**D56532**	RunNo:	**56532**
Prep Date:		Analysis Date:	**12/21/2018**	SeqNo:	**1891677** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.03242	99.1	70	130	3.10	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	3.26	20	
Calcium	62	1.0	50.00	9.781	105	70	130	4.53	20	
Chromium	0.50	0.0060	0.5000	0.002677	98.6	70	130	2.87	20	
Copper	0.51	0.0060	0.5000	0.003871	101	70	130	2.53	20	
Iron	0.74	0.020	0.5000	0.1596	116	70	130	1.54	20	
Magnesium	50	1.0	50.00	0.5029	100	70	130	4.36	20	
Manganese	0.50	0.0020	0.5000	0.004933	99.1	70	130	3.08	20	
Potassium	51	1.0	50.00	1.169	98.7	70	130	4.25	20	
Silver	0.095	0.0050	0.1000	0	94.5	70	130	3.85	20	
Zinc	0.53	0.010	0.5000	0.01609	104	70	130	3.16	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **MB-41625**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41625**	RunNo: **55850**
Prep Date: **11/19/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864109** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LLLCS-41625**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41625**	RunNo: **55850**
Prep Date: **11/19/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0019	0.0020	0.002000	0	97.0	50	150			J
Cadmium	0.0021	0.0020	0.002000	0	104	50	150			
Chromium	0.0064	0.0060	0.006000	0	108	50	150			
Copper	0.0059	0.0060	0.006000	0	98.2	50	150			J
Iron	0.023	0.020	0.02000	0	114	50	150			
Manganese	0.0022	0.0020	0.002000	0	111	50	150			
Silver	0.0052	0.0050	0.005000	0	103	50	150			
Zinc	0.0072	0.010	0.005000	0	143	50	150			J

Sample ID **LCS-41625**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41625**	RunNo: **55850**
Prep Date: **11/19/2018**	Analysis Date: **11/26/2018**	SeqNo: **1864114** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0	103	85	115			
Cadmium	0.53	0.0020	0.5000	0	107	85	115			
Chromium	0.52	0.0060	0.5000	0	104	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Zinc	0.53	0.010	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00095	0.0010	0.001000	0	95.0	50	150			J
Lead	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.00089	0.0010	0.001000	0	89.4	50	150			J
Uranium	0.00054	0.00050	0.0005000	0	108	50	150			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.6	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.023	0.0010	0.02500	0	90.2	85	115			
Uranium	0.013	0.00050	0.01250	0	105	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B56037**	RunNo: **56037**
Prep Date:	Analysis Date: **12/3/2018**	SeqNo: **1870577** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872878** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								
Uranium	ND	0.00050								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872879** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872879** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00096	0.0010	0.001000	0	96.4	50	150			J
Lead	0.00046	0.00050	0.0005000	0	92.3	50	150			J
Selenium	0.00091	0.0010	0.001000	0	90.8	50	150			J
Uranium	0.00044	0.00050	0.0005000	0	88.7	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56062**	RunNo: **56062**
Prep Date:	Analysis Date: **12/4/2018**	SeqNo: **1872880** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.2	85	115			
Lead	0.012	0.00050	0.01250	0	96.0	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.012	0.00050	0.01250	0	92.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**MB-41625**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**41625**		RunNo:	**55865**				
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1863450**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41625**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**41625**		RunNo:	**55865**				
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1863452**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	115	50	150			
Lead	0.00049	0.00050	0.0005000	0	98.1	50	150			J
Selenium	0.0011	0.0010	0.001000	0	108	50	150			

Sample ID	**MSLCS-41625**	SampType:	**LCS**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**LCSW**	Batch ID:	**41625**		RunNo:	**55865**				
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1863454**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0	108	85	115			
Lead	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.027	0.0010	0.02500	0	107	85	115			

Sample ID	**MB-41625**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**PBW**	Batch ID:	**41625**		RunNo:	**55865**				
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1863511**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID	**MSLLLCS-41625**	SampType:	**LCSLL**		TestCode:	**200.8 ICPMS Metals:Total**				
Client ID:	**BatchQC**	Batch ID:	**41625**		RunNo:	**55865**				
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**		SeqNo:	**1863513**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00046	0.00050	0.0005000	0	92.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**MSLCS-41625**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41625**	RunNo:	**55865**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/26/2018**	SeqNo:	**1863515**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.012	0.00050	0.01250	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**MB-41862**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**41862**	RunNo:	**56066**					
Prep Date:	**12/3/2018**	Analysis Date:	**12/4/2018**	SeqNo:	**1872319**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000044	0.00020								J

Sample ID	**LCS-41862**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**41862**	RunNo:	**56066**					
Prep Date:	**12/3/2018**	Analysis Date:	**12/4/2018**	SeqNo:	**1872345**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.6	80	120			

Sample ID	**MB-41897**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**41897**	RunNo:	**56104**					
Prep Date:	**12/4/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1873754**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-41897**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**41897**	RunNo:	**56104**					
Prep Date:	**12/4/2018**	Analysis Date:	**12/5/2018**	SeqNo:	**1873755**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.2	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55729**	RunNo: **55729**
Prep Date:	Analysis Date: **11/16/2018**	SeqNo: **1857152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.14	0.50								J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55729**	RunNo: **55729**
Prep Date:	Analysis Date: **11/16/2018**	SeqNo: **1857153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0	108	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.1	90	110			
Bromide	2.5	0.10	2.500	0	98.3	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	90	110			
Sulfate	10	0.50	10.00	0	101	90	110			

Sample ID **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R55875**	RunNo: **55875**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1865061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R55875**	RunNo: **55875**
Prep Date:	Analysis Date: **11/27/2018**	SeqNo: **1865062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**MB-41603**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41603**	RunNo:	**55753**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/19/2018**	SeqNo:	**1858023**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41603**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41603**	RunNo:	**55753**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/19/2018**	SeqNo:	**1858024**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	111	70	130			

Sample ID	**LCSD-41603**	SampType:	**LCSD**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSS02**	Batch ID:	**41603**	RunNo:	**55753**					
Prep Date:	**11/19/2018**	Analysis Date:	**11/19/2018**	SeqNo:	**1858025**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	105	70	130	5.54	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **LCS-41593**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41593**	RunNo: **55741**
Prep Date: **11/16/2018**	Analysis Date: **11/19/2018**	SeqNo: **1859054** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.6	1.0	5.000	0	92.9	70	130			
Surr: DNOP	0.53		0.5000		106	76.7	135			

Sample ID **MB-41593**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41593**	RunNo: **55741**
Prep Date: **11/16/2018**	Analysis Date: **11/19/2018**	SeqNo: **1859055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		113	76.7	135			

Sample ID **1811857-003BMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-44**	Batch ID: **41593**	RunNo: **55741**
Prep Date: **11/16/2018**	Analysis Date: **11/19/2018**	SeqNo: **1859057** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	82.8	143			
Surr: DNOP	0.56		0.5000		112	76.7	135			

Sample ID **1811857-003BMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **MKTF-44**	Batch ID: **41593**	RunNo: **55741**
Prep Date: **11/16/2018**	Analysis Date: **11/19/2018**	SeqNo: **1859058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	102	82.8	143	4.48	20	
Surr: DNOP	0.58		0.5000		116	76.7	135	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **W55743**	RunNo: **55743**
Prep Date:	Analysis Date: **11/19/2018**	SeqNo: **1857977** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.9	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **W55743**	RunNo: **55743**
Prep Date:	Analysis Date: **11/19/2018**	SeqNo: **1857978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.8	77.7	130			
Surr: BFB	20		20.00		101	72.8	125			

Sample ID **1811857-008AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **W55743**	RunNo: **55743**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1857995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	1.0	10.00	15.56	99.1	65.4	140			
Surr: BFB	440		400.0		110	72.8	125			

Sample ID **1811857-008AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-24**	Batch ID: **W55743**	RunNo: **55743**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1857996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	1.0	10.00	15.56	95.4	65.4	140	1.47	20	
Surr: BFB	450		400.0		111	72.8	125	0	0	

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		87.1	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G55859**	RunNo: **55859**
Prep Date:	Analysis Date: **11/26/2018**	SeqNo: **1863101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSW**	Batch ID:	**G55859**		RunNo:	**55859**				
Prep Date:		Analysis Date:	**11/26/2018**		SeqNo:	**1863101**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.6	77.7	130			
Surr: BFB	20		20.00		98.1	72.8	125			

Sample ID	**1811857-012AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-27**	Batch ID:	**G55859**		RunNo:	**55859**				
Prep Date:		Analysis Date:	**11/26/2018**		SeqNo:	**1863103**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.3	65.4	140			
Surr: BFB	19		20.00		93.0	72.8	125			

Sample ID	**1811857-012AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**MKTF-27**	Batch ID:	**G55859**		RunNo:	**55859**				
Prep Date:		Analysis Date:	**11/26/2018**		SeqNo:	**1863104**	Units:	**mg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.9	65.4	140	1.41	20	
Surr: BFB	18		20.00		90.8	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860270** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	98.0	70	130			
Chlorobenzene	20	1.0	20.00	0	98.3	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860277** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860277** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860277** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID **1811857-003ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860287** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	60.5	137			
Toluene	20	1.0	20.00	0	97.9	70	130			
Chlorobenzene	19	1.0	20.00	0	96.4	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	67.6	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.9	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID **1811857-003amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-44**	Batch ID: **R55795**	RunNo: **55795**
Prep Date:	Analysis Date: **11/20/2018**	SeqNo: **1860288** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	60.5	137	3.49	20	
Toluene	19	1.0	20.00	0	96.3	70	130	1.71	20	
Chlorobenzene	19	1.0	20.00	0	96.2	70	130	0.208	20	
1,1-Dichloroethene	21	1.0	20.00	0	103	67.6	130	4.43	20	
Trichloroethene (TCE)	19	1.0	20.00	0	96.1	70	130	3.92	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		99.8	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		95.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **100NG LCS**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A55807**	RunNo: **55807**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861034** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A55807**	RunNo: **55807**
Prep Date:	Analysis Date: **11/21/2018**	SeqNo: **1861035** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		96.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **1811857-015dms**	SampType: **MS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878097** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	68	10	100.0	0	68.4	15	123			
4-Chloro-3-methylphenol	130	10	200.0	0	66.6	26.6	118			
2-Chlorophenol	120	10	200.0	0	62.5	15	120			
1,4-Dichlorobenzene	49	10	100.0	0	48.8	19	108			
2,4-Dinitrotoluene	65	10	100.0	0	65.2	27.8	103			
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	32.3	126			
4-Nitrophenol	28	10	200.0	0	13.8	15	72.1			S
Pentachlorophenol	93	20	200.0	0	46.3	15	114			
Phenol	66	10	200.0	0	33.0	15	67.5			
Pyrene	82	10	100.0	0	82.2	31.2	112			
1,2,4-Trichlorobenzene	60	10	100.0	0	60.3	22.1	123			
Surr: 2-Fluorophenol	84		200.0		42.2	15	74.1			
Surr: Phenol-d5	62		200.0		31.0	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		76.2	22.1	112			
Surr: Nitrobenzene-d5	67		100.0		67.2	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		61.5	34	90.9			
Surr: 4-Terphenyl-d14	57		100.0		57.4	15	149			

Sample ID **1811857-015dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878098** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	63.1	15	123	8.06	30.5	
4-Chloro-3-methylphenol	130	10	200.0	0	64.9	26.6	118	2.69	50	
2-Chlorophenol	130	10	200.0	0	63.3	15	120	1.32	36.3	
1,4-Dichlorobenzene	55	10	100.0	0	55.5	19	108	12.8	42.1	
2,4-Dinitrotoluene	59	10	100.0	0	58.7	27.8	103	10.5	28.5	
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.0	32.3	126	0.525	25.4	
4-Nitrophenol	32	10	200.0	0	15.9	15	72.1	14.0	50	
Pentachlorophenol	97	20	200.0	0	48.3	15	114	4.31	50	
Phenol	69	10	200.0	0	34.3	15	67.5	3.71	46.1	
Pyrene	75	10	100.0	0	74.7	31.2	112	9.61	34.3	
1,2,4-Trichlorobenzene	67	10	100.0	0	66.8	22.1	123	10.2	43.6	
Surr: 2-Fluorophenol	92		200.0		45.8	15	74.1	0	0	
Surr: Phenol-d5	68		200.0		34.1	15	59.8	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		70.3	22.1	112	0	0	
Surr: Nitrobenzene-d5	69		100.0		68.6	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	60		100.0		59.8	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **1811857-015dmsd**	SampType: **MSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MKTF-29**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878098** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	53		100.0		53.4	15	149	0	0	

Sample ID **lcs-41637**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878102** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	45	10	100.0	0	45.4	55.1	104			S
4-Chloro-3-methylphenol	110	10	200.0	0	54.7	57	115			S
2-Chlorophenol	80	10	200.0	0	39.8	43.4	112			S
1,4-Dichlorobenzene	32	10	100.0	0	31.9	38	95.2			S
2,4-Dinitrotoluene	69	10	100.0	0	68.6	55.1	96.7			
N-Nitrosodi-n-propylamine	44	10	100.0	0	44.2	55	112			S
4-Nitrophenol	99	10	200.0	0	49.4	16.6	93			
Pentachlorophenol	130	20	200.0	0	63.4	43.2	104			
Phenol	55	10	200.0	0	27.7	21.3	85.7			
Pyrene	92	10	100.0	0	91.6	64.9	105			
1,2,4-Trichlorobenzene	36	10	100.0	0	36.4	42.6	107			S
Surr: 2-Fluorophenol	47		200.0		23.3	15	74.1			
Surr: Phenol-d5	34		200.0		17.2	15	59.8			
Surr: 2,4,6-Tribromophenol	130		200.0		67.4	22.1	112			
Surr: Nitrobenzene-d5	33		100.0		33.1	33.2	94			S
Surr: 2-Fluorobiphenyl	32		100.0		32.1	34	90.9			S
Surr: 4-Terphenyl-d14	83		100.0		83.0	15	149			

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**

26-Dec-18

Client: MARATHON GALLUP

Project: 4th QTR 2018 GW

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1811857**
26-Dec-18

Client: MARATHON GALLUP
Project: 4th QTR 2018 GW

Sample ID **mb-41637**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41637**	RunNo: **56223**
Prep Date: **11/20/2018**	Analysis Date: **12/10/2018**	SeqNo: **1878103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		50.2	15	74.1			
Surr: Phenol-d5	76		200.0		38.0	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.2	22.1	112			
Surr: Nitrobenzene-d5	77		100.0		76.8	33.2	94			
Surr: 2-Fluorobiphenyl	76		100.0		76.1	34	90.9			
Surr: 4-Terphenyl-d14	87		100.0		87.3	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811857** RcptNo: **1**

Received By: **Erin Melendrez** **11/15/2018 3:43:00 PM**

Completed By: **Erin Melendrez** **11/15/2018 3:59:34 PM**

Reviewed By: IO 11/16/18

LB: JU 11.15.18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☑ IO 11.16.18 No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
Adjusted? No
Checked by: JU 11.16.18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: MKTF-32 1 VOA Vial 504 broken.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.0	Good	Yes			
2	8.2	Good	Yes			
3	8.8	Good	Yes			
4	6.3	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **MARATHON GALLUP** Work Order Number: **1811857** RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
5	6.0	Good	Yes			

Page 1 of 2

Chain-of-Custody Record

Client: Marathon

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ **Rush**

Project Name: ~~20~~ 4th QTR 2018 GW

Project #: MKTF Wells

Project Manager: CJohnson

Sampler: CJohnson

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811857	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8015D DRO/GRO/MRO	Cations/Anions	Total	8011 - EDB	Air Bubbles (Y or N)
11/15/18	0700	AQ	TRip Blank	Misc	Misc	-001										X						
	0700		Field Blank			-002										X						
	802		MKTF-44			-003										X	X	X	X	X	X	
	828		MKTF-42			-004										X	X				X	
	846		32			-005										X	X				X	
	907		41			-006										X					X	
	925		43			-007										X						
	951		24			-008										X					X	
	1012		25			-009										X					X	
	1032		31			-010										X					X	
	1055		40			-011										X					X	
	1116		27			-012										X					X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/15/18	1335			11/15/18	1340
11/15/18	1643			11/15/18	1643

Remarks:
6.8+0.2(CF)=7.0 7.3-1.0(CF)=6.3
9.2-1.0(CF)=8.2 7.0-1.0(CF)=6.0
9.8-1.0(CF)=8.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: @ Marathon

Mailing Address: 9266 Count Crossing Rd
Gallup NM

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☒ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ **Rush** _____

Project Name: 4th QTR 2018 GW

Project #: MKTF Wells

Project Manager: C Johnson

Sampler: C Johnson

On Ice: ☒ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1811857	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8015D DRO/MRO/GRO	Carbon/Methane	WQCC TDS	8011 - EDB	Air Bubbles (Y or N)
11/5/18	1137	AQ	MKTF-30	Misc	Misc	-013										X	X	X	X	X	X	
	1155		Duplicate			-014										X	X	X	X	X	X	
	1210		MKTF-29*			-015										X	2	X	X	X		
	1230		MKTF-28			-016										X	X	X	X	X		

Date	Time	Relinquished by:	Received by:	Date	Time
11/5/18	1335			11/15/18	1340
11/15/18	1643			11/15/18	1643

Remarks:
* Extra 8270 6.8+0.2(CF)=7.0
9.2-1.0(CF)=8.2
9.8-1.0(CF)=8.8
7.3-1.0(CF)=6.3
7.0-1.0(CF)=6.0

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Cheryl Johnson
MARATHON GALLUP
92 Giant Crossing Rd
Gallup, NM 87301
TEL:
FAX

RE: 2018 4th Qtr GW Sampling OrderNo.: 1812130

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 7:00:00 AM
Lab ID: 1812130-001 **Matrix:** AQUEOUS **Received Date:** 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Toluene	0.30	0.17	1.0	J	µg/L	1	12/7/2018 2:11:00 PM	R56157
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Naphthalene	ND	0.29	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Acetone	ND	0.76	10		µg/L	1	12/7/2018 2:11:00 PM	R56157
Bromobenzene	ND	0.32	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Bromoform	ND	0.32	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Bromomethane	ND	0.27	3.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
2-Butanone	ND	1.4	10		µg/L	1	12/7/2018 2:11:00 PM	R56157
Carbon disulfide	ND	0.39	10		µg/L	1	12/7/2018 2:11:00 PM	R56157
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Chloroethane	ND	0.16	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Chloroform	ND	0.24	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Chloromethane	ND	0.32	3.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Dibromomethane	ND	0.32	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Field Blank
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 7:00:00 AM
Lab ID: 1812130-001 **Matrix:** AQUEOUS **Received Date:** 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
2-Hexanone	ND	0.91	10		µg/L	1	12/7/2018 2:11:00 PM	R56157
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/7/2018 2:11:00 PM	R56157
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Styrene	ND	0.25	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/7/2018 2:11:00 PM	R56157
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/7/2018 2:11:00 PM	R56157
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	12/7/2018 2:11:00 PM	R56157
Surr: 4-Bromofluorobenzene	99.7	0	70-130		%Rec	1	12/7/2018 2:11:00 PM	R56157
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	12/7/2018 2:11:00 PM	R56157
Surr: Toluene-d8	91.6	0	70-130		%Rec	1	12/7/2018 2:11:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1812130-002
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	0.024	0.050		mg/L	1	12/6/2018 11:12:20 AM	G56130
Surr: BFB	81.5	0	72.8-125		%Rec	1	12/6/2018 11:12:20 AM	G56130
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.17	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Toluene	ND	0.17	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Ethylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Naphthalene	ND	0.29	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Acetone	ND	0.76	10		µg/L	1	12/7/2018 2:34:00 PM	R56157
Bromobenzene	ND	0.32	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Bromodichloromethane	ND	0.28	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Bromoform	ND	0.32	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Bromomethane	ND	0.27	3.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
2-Butanone	ND	1.4	10		µg/L	1	12/7/2018 2:34:00 PM	R56157
Carbon disulfide	ND	0.39	10		µg/L	1	12/7/2018 2:34:00 PM	R56157
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Chlorobenzene	ND	0.29	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Chloroethane	ND	0.16	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Chloroform	ND	0.24	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Chloromethane	ND	0.32	3.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Dibromochloromethane	ND	0.24	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Dibromomethane	ND	0.32	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: Trip Blank
Project: 2018 4th Qtr GW Sampling
Collection Date:
Lab ID: 1812130-002
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
2-Hexanone	ND	0.91	10		µg/L	1	12/7/2018 2:34:00 PM	R56157
Isopropylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	12/7/2018 2:34:00 PM	R56157
Methylene Chloride	ND	0.21	3.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
n-Butylbenzene	ND	0.25	3.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
n-Propylbenzene	ND	0.24	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Styrene	ND	0.25	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Vinyl chloride	ND	0.12	1.0		µg/L	1	12/7/2018 2:34:00 PM	R56157
Xylenes, Total	ND	0.64	1.5		µg/L	1	12/7/2018 2:34:00 PM	R56157
Surr: 1,2-Dichloroethane-d4	108	0	70-130		%Rec	1	12/7/2018 2:34:00 PM	R56157
Surr: 4-Bromofluorobenzene	98.5	0	70-130		%Rec	1	12/7/2018 2:34:00 PM	R56157
Surr: Dibromofluoromethane	99.6	0	70-130		%Rec	1	12/7/2018 2:34:00 PM	R56157
Surr: Toluene-d8	89.4	0	70-130		%Rec	1	12/7/2018 2:34:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	6.1	0.63	1.0		mg/L	1	12/10/2018 5:54:36 PM	41963
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/10/2018 5:54:36 PM	41963
Surr: DNOP	112	0	76.7-135		%Rec	1	12/10/2018 5:54:36 PM	41963
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	26	1.2	2.5		mg/L	50	12/6/2018 11:35:08 AM	G5613(
Surr: BFB	99.1	0	72.8-125		%Rec	50	12/6/2018 11:35:08 AM	G5613(
EPA METHOD 300.0: ANIONS							Analyst: **smb**	
Fluoride	ND	0.50	0.50		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Chloride	96	2.5	2.5		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Nitrogen, Nitrite (As N)	ND	0.025	0.50		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Bromide	0.54	0.10	0.50		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Nitrogen, Nitrate (As N)	ND	0.25	0.50		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Phosphorus, Orthophosphate (As P)	2.5	2.5	2.5		mg/L	5	12/5/2018 12:51:08 PM	R5611(
Sulfate	ND	0.63	2.5		mg/L	5	12/5/2018 12:51:08 PM	R5611(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	3.7	0.0099	0.020	*	mg/L	10	1/3/2019 11:58:41 PM	C5677(
Cadmium	ND	0.0010	0.0020		mg/L	1	1/3/2019 11:56:39 PM	C5677(
Calcium	70	0.078	1.0		mg/L	1	1/3/2019 11:56:39 PM	C5677(
Chromium	ND	0.0013	0.0060		mg/L	1	1/3/2019 11:56:39 PM	C5677(
Copper	ND	0.0032	0.0060		mg/L	1	1/3/2019 11:56:39 PM	C5677(
Iron	5.3	0.16	0.20	*	mg/L	10	1/3/2019 11:58:41 PM	C5677(
Magnesium	16	0.25	1.0		mg/L	1	1/3/2019 11:56:39 PM	C5677(
Manganese	0.93	0.00039	0.0020	*	mg/L	1	1/3/2019 11:56:39 PM	C5677(
Potassium	0.66	0.11	1.0	J	mg/L	1	1/3/2019 11:56:39 PM	C5677(
Silver	ND	0.0018	0.0050		mg/L	1	1/5/2019 1:04:46 PM	F56787
Sodium	290	1.6	10		mg/L	10	1/3/2019 11:58:41 PM	C5677(
Zinc	0.031	0.0021	0.010		mg/L	1	1/5/2019 1:04:46 PM	F56787
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	3.7	0.0050	0.010	*	mg/L	5	12/11/2018 9:28:33 PM	41906
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 9:26:33 PM	41906
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 9:26:33 PM	41906
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 9:26:33 PM	41906
Iron	5.8	0.10	0.20	*	mg/L	10	12/13/2018 4:39:46 PM	41906
Manganese	1.2	0.0055	0.010	*	mg/L	5	12/11/2018 9:28:33 PM	41906
Silver	0.0017	0.0012	0.0050	J	mg/L	1	12/11/2018 9:26:33 PM	41906
Zinc	0.0056	0.0033	0.010	J	mg/L	1	12/13/2018 4:32:50 PM	41906
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.011	0.00042	0.0010	*	mg/L	1	12/12/2018 6:48:45 PM	D56272
Lead	ND	0.00017	0.00050		mg/L	1	12/12/2018 6:48:45 PM	D56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 6:48:45 PM	D56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.012	0.00041	0.0010	*	mg/L	1	12/11/2018 6:01:22 PM	41906
Lead	0.00053	0.00023	0.00050		mg/L	1	12/11/2018 6:01:22 PM	41906
Selenium	ND	0.00098	0.0010		mg/L	1	12/11/2018 6:01:22 PM	41906
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.00015	0.000038	0.00020	J	mg/L	1	12/14/2018 11:55:49 A	42108
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Acenaphthene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Acenaphthylene	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Aniline	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Anthracene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Azobenzene	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benz(a)anthracene	ND	26	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzo(a)pyrene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzo(b)fluoranthene	ND	36	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzo(g,h,i)perylene	ND	28	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzo(k)fluoranthene	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzoic acid	120	32	100	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Benzyl alcohol	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Bis(2-chloroethoxy)methane	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Bis(2-chloroethyl)ether	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Bis(2-chloroisopropyl)ether	ND	24	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Bis(2-ethylhexyl)phthalate	ND	40	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Bromophenyl phenyl ether	ND	35	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Butyl benzyl phthalate	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Carbazole	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Chloro-3-methylphenol	ND	28	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Chloroaniline	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Chloronaphthalene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Chlorophenol	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Chlorophenyl phenyl ether	ND	36	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Chrysene	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Di-n-butyl phthalate	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Di-n-octyl phthalate	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Dibenz(a,h)anthracene	ND	28	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Dibenzofuran	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
1,2-Dichlorobenzene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
1,3-Dichlorobenzene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
1,4-Dichlorobenzene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
3,3´-Dichlorobenzidine	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Diethyl phthalate	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Dimethyl phthalate	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4-Dichlorophenol	ND	29	100	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4-Dimethylphenol	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4,6-Dinitro-2-methylphenol	ND	27	100	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4-Dinitrophenol	ND	19	100	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4-Dinitrotoluene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,6-Dinitrotoluene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Fluoranthene	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Fluorene	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Hexachlorobenzene	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Hexachlorobutadiene	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Hexachlorocyclopentadiene	ND	20	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Hexachloroethane	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Indeno(1,2,3-cd)pyrene	ND	35	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Isophorone	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
1-Methylnaphthalene	75	35	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Methylnaphthalene	88	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Methylphenol	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
3+4-Methylphenol	ND	27	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
N-Nitrosodi-n-propylamine	ND	31	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
N-Nitrosodimethylamine	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
N-Nitrosodiphenylamine	ND	33	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Naphthalene	230	25	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Nitroaniline	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
3-Nitroaniline	ND	34	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Nitroaniline	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Nitrobenzene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2-Nitrophenol	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
4-Nitrophenol	ND	28	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Pentachlorophenol	ND	26	100	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Phenanthrene	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Phenol	ND	30	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Pyrene	ND	33	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**	
Pyridine	ND	27	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
1,2,4-Trichlorobenzene	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4,5-Trichlorophenol	ND	29	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
2,4,6-Trichlorophenol	ND	32	50	D	µg/L	1	12/14/2018 2:39:40 PM	41932
Surr: 2-Fluorophenol	41.5	0	15-74.1	D	%Rec	1	12/14/2018 2:39:40 PM	41932
Surr: Phenol-d5	32.4	0	15-59.8	D	%Rec	1	12/14/2018 2:39:40 PM	41932
Surr: 2,4,6-Tribromophenol	74.9	0	22.1-112	D	%Rec	1	12/14/2018 2:39:40 PM	41932
Surr: Nitrobenzene-d5	56.0	0	33.2-94	D	%Rec	1	12/14/2018 2:39:40 PM	41932
Surr: 2-Fluorobiphenyl	40.1	0	34-90.9	D	%Rec	1	12/14/2018 2:39:40 PM	41932
Surr: 4-Terphenyl-d14	53.4	0	15-149	D	%Rec	1	12/14/2018 2:39:40 PM	41932
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	8800	35	200		µg/L	200	12/7/2018 2:58:00 PM	R56157
Toluene	70	3.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Ethylbenzene	1100	4.5	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Methyl tert-butyl ether (MTBE)	33	9.1	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2,4-Trimethylbenzene	10	5.1	20	J	µg/L	20	12/7/2018 3:22:00 PM	R56157
1,3,5-Trimethylbenzene	28	4.6	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2-Dichloroethane (EDC)	ND	3.8	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2-Dibromoethane (EDB)	ND	4.6	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Naphthalene	320	5.8	40		µg/L	20	12/7/2018 3:22:00 PM	R56157
1-Methylnaphthalene	70	6.7	80	J	µg/L	20	12/7/2018 3:22:00 PM	R56157
2-Methylnaphthalene	76	6.9	80	J	µg/L	20	12/7/2018 3:22:00 PM	R56157
Acetone	ND	15	200		µg/L	20	12/7/2018 3:22:00 PM	R56157
Bromobenzene	ND	6.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Bromodichloromethane	ND	5.7	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Bromoform	ND	6.5	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Bromomethane	ND	5.5	60		µg/L	20	12/7/2018 3:22:00 PM	R56157
2-Butanone	ND	28	200		µg/L	20	12/7/2018 3:22:00 PM	R56157
Carbon disulfide	ND	7.7	200		µg/L	20	12/7/2018 3:22:00 PM	R56157
Carbon Tetrachloride	ND	2.7	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Chlorobenzene	ND	5.8	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Chloroethane	ND	3.3	40		µg/L	20	12/7/2018 3:22:00 PM	R56157
Chloroform	ND	4.7	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Chloromethane	ND	6.4	60		µg/L	20	12/7/2018 3:22:00 PM	R56157
2-Chlorotoluene	ND	5.0	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
4-Chlorotoluene	ND	5.6	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
cis-1,2-DCE	ND	7.5	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
cis-1,3-Dichloropropene	ND	6.0	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2-Dibromo-3-chloropropane	ND	9.4	40		µg/L	20	12/7/2018 3:22:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Dibromochloromethane	ND	4.7	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Dibromomethane	ND	6.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2-Dichlorobenzene	ND	6.2	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,3-Dichlorobenzene	ND	6.3	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,4-Dichlorobenzene	ND	5.8	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Dichlorodifluoromethane	ND	5.2	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1-Dichloroethane	ND	3.5	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1-Dichloroethene	ND	2.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2-Dichloropropane	ND	3.3	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,3-Dichloropropane	ND	5.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
2,2-Dichloropropane	ND	4.7	40		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1-Dichloropropene	ND	3.3	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Hexachlorobutadiene	ND	7.8	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
2-Hexanone	ND	18	200		µg/L	20	12/7/2018 3:22:00 PM	R56157
Isopropylbenzene	50	4.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
4-Isopropyltoluene	ND	4.8	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
4-Methyl-2-pentanone	ND	9.1	200		µg/L	20	12/7/2018 3:22:00 PM	R56157
Methylene Chloride	ND	4.1	60		µg/L	20	12/7/2018 3:22:00 PM	R56157
n-Butylbenzene	19	5.0	60	J	µg/L	20	12/7/2018 3:22:00 PM	R56157
n-Propylbenzene	160	4.9	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
sec-Butylbenzene	7.3	4.0	20	J	µg/L	20	12/7/2018 3:22:00 PM	R56157
Styrene	ND	5.0	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
tert-Butylbenzene	ND	4.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1,1,2-Tetrachloroethane	ND	5.0	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1,2,2-Tetrachloroethane	ND	6.6	40		µg/L	20	12/7/2018 3:22:00 PM	R56157
Tetrachloroethene (PCE)	ND	3.0	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
trans-1,2-DCE	ND	3.6	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
trans-1,3-Dichloropropene	ND	5.5	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2,3-Trichlorobenzene	ND	5.6	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2,4-Trichlorobenzene	ND	5.3	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1,1-Trichloroethane	ND	3.3	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,1,2-Trichloroethane	ND	4.7	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Trichloroethene (TCE)	ND	5.2	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Trichlorofluoromethane	ND	2.9	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
1,2,3-Trichloropropane	ND	11	40		µg/L	20	12/7/2018 3:22:00 PM	R56157
Vinyl chloride	ND	2.4	20		µg/L	20	12/7/2018 3:22:00 PM	R56157
Xylenes, Total	430	13	30		µg/L	20	12/7/2018 3:22:00 PM	R56157
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	20	12/7/2018 3:22:00 PM	R56157
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	20	12/7/2018 3:22:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-63
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 3:00:00 PM
Lab ID: 1812130-003
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Surr: Dibromofluoromethane	93.2	0	70-130		%Rec	20	12/7/2018 3:22:00 PM	R56157
Surr: Toluene-d8	95.7	0	70-130		%Rec	20	12/7/2018 3:22:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 4:00:00 PM
Lab ID: 1812130-004
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8011/504.1: EDB							Analyst: **JME**	
1,2-Dibromoethane	ND	0.0050	0.0096		µg/L	1	12/8/2018 9:02:44 AM	41942
EPA METHOD 8015M/D: DIESEL RANGE							Analyst: **lrm**	
Diesel Range Organics (DRO)	0.92	0.63	1.0	J	mg/L	1	12/10/2018 6:16:36 PM	41963
Motor Oil Range Organics (MRO)	ND	5.0	5.0		mg/L	1	12/10/2018 6:16:36 PM	41963
Surr: DNOP	111	0	76.7-135		%Rec	1	12/10/2018 6:16:36 PM	41963
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**	
Gasoline Range Organics (GRO)	1.3	0.12	0.25		mg/L	5	12/6/2018 1:05:53 PM	G5613(
Surr: BFB	85.0	0	72.8-125		%Rec	5	12/6/2018 1:05:53 PM	G5613(
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **ELS**	
Barium	0.12	0.00099	0.0020		mg/L	1	1/4/2019 12:01:01 AM	C5677(
Cadmium	ND	0.0010	0.0020		mg/L	1	1/4/2019 12:01:01 AM	C5677(
Chromium	ND	0.0013	0.0060		mg/L	1	1/4/2019 12:01:01 AM	C5677(
Copper	0.0041	0.0032	0.0060	J	mg/L	1	1/4/2019 12:01:01 AM	C5677(
Iron	0.061	0.016	0.020		mg/L	1	1/4/2019 12:01:01 AM	C5677(
Manganese	0.053	0.00039	0.0020	*	mg/L	1	1/4/2019 12:01:01 AM	C5677(
Silver	ND	0.0018	0.0050		mg/L	1	1/5/2019 1:06:48 PM	F56787
Zinc	0.034	0.0021	0.010		mg/L	1	1/5/2019 1:06:48 PM	F56787
EPA METHOD 200.7: TOTAL METALS							Analyst: **ELS**	
Barium	0.13	0.0010	0.0020		mg/L	1	12/11/2018 9:30:31 PM	41906
Cadmium	ND	0.00058	0.0020		mg/L	1	12/11/2018 9:30:31 PM	41906
Chromium	ND	0.0018	0.0060		mg/L	1	12/11/2018 9:30:31 PM	41906
Copper	ND	0.0041	0.0060		mg/L	1	12/11/2018 9:30:31 PM	41906
Iron	0.10	0.010	0.020		mg/L	1	12/11/2018 9:30:31 PM	41906
Manganese	0.057	0.0011	0.0020	*	mg/L	1	12/11/2018 9:30:31 PM	41906
Silver	0.0021	0.0012	0.0050	J	mg/L	1	12/11/2018 9:30:31 PM	41906
Zinc	ND	0.0033	0.010		mg/L	1	12/13/2018 4:35:01 PM	41906
EPA 200.8: DISSOLVED METALS							Analyst: **DBK**	
Arsenic	0.00084	0.00042	0.0010	J	mg/L	1	12/12/2018 6:51:10 PM	D56272
Lead	0.00042	0.00017	0.00050	J	mg/L	1	12/12/2018 6:51:10 PM	D56272
Selenium	ND	0.00076	0.0010		mg/L	1	12/12/2018 6:51:10 PM	D56272
200.8 ICPMS METALS:TOTAL							Analyst: **DBK**	
Arsenic	0.0011	0.00041	0.0010		mg/L	1	12/11/2018 6:03:19 PM	41906
Lead	0.00050	0.00023	0.00050		mg/L	1	12/11/2018 6:03:19 PM	41906
Selenium	ND	0.00098	0.0010		mg/L	1	12/11/2018 6:03:19 PM	41906
EPA METHOD 245.1: MERCURY							Analyst: **pmf**	
Mercury	0.000082	0.000038	0.00020	J	mg/L	1	12/14/2018 11:58:03 A	42108

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 4:00:00 PM
Lab ID: 1812130-004
Matrix: AQUEOUS
Received Date: 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
Benzene	ND	0.87	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Toluene	ND	0.84	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Ethylbenzene	ND	1.1	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Methyl tert-butyl ether (MTBE)	2700	23	50		µg/L	50	12/7/2018 3:46:00 PM	R56157
1,2,4-Trimethylbenzene	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,3,5-Trimethylbenzene	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2-Dichloroethane (EDC)	ND	0.95	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2-Dibromoethane (EDB)	ND	1.1	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Naphthalene	ND	1.4	10		µg/L	5	12/7/2018 4:10:00 PM	R56157
1-Methylnaphthalene	ND	1.7	20		µg/L	5	12/7/2018 4:10:00 PM	R56157
2-Methylnaphthalene	ND	1.7	20		µg/L	5	12/7/2018 4:10:00 PM	R56157
Acetone	ND	3.8	50		µg/L	5	12/7/2018 4:10:00 PM	R56157
Bromobenzene	ND	1.6	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Bromodichloromethane	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Bromoform	ND	1.6	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Bromomethane	ND	1.4	15		µg/L	5	12/7/2018 4:10:00 PM	R56157
2-Butanone	ND	7.1	50		µg/L	5	12/7/2018 4:10:00 PM	R56157
Carbon disulfide	ND	1.9	50		µg/L	5	12/7/2018 4:10:00 PM	R56157
Carbon Tetrachloride	ND	0.69	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Chlorobenzene	ND	1.5	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Chloroethane	ND	0.82	10		µg/L	5	12/7/2018 4:10:00 PM	R56157
Chloroform	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Chloromethane	ND	1.6	15		µg/L	5	12/7/2018 4:10:00 PM	R56157
2-Chlorotoluene	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
4-Chlorotoluene	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
cis-1,2-DCE	ND	1.9	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
cis-1,3-Dichloropropene	ND	1.5	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2-Dibromo-3-chloropropane	ND	2.4	10		µg/L	5	12/7/2018 4:10:00 PM	R56157
Dibromochloromethane	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Dibromomethane	ND	1.6	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,3-Dichlorobenzene	ND	1.6	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,4-Dichlorobenzene	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Dichlorodifluoromethane	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1-Dichloroethane	ND	0.88	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1-Dichloroethene	ND	0.60	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2-Dichloropropane	ND	0.83	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,3-Dichloropropane	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
2,2-Dichloropropane	ND	1.2	10		µg/L	5	12/7/2018 4:10:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: MARATHON GALLUP
Client Sample ID: OW-30
Project: 2018 4th Qtr GW Sampling
Collection Date: 12/3/2018 4:00:00 PM
Lab ID: 1812130-004 **Matrix:** AQUEOUS **Received Date:** 12/4/2018 12:00:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
1,1-Dichloropropene	ND	0.81	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Hexachlorobutadiene	ND	2.0	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
2-Hexanone	ND	4.5	50		µg/L	5	12/7/2018 4:10:00 PM	R56157
Isopropylbenzene	ND	1.1	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
4-Isopropyltoluene	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
4-Methyl-2-pentanone	ND	2.3	50		µg/L	5	12/7/2018 4:10:00 PM	R56157
Methylene Chloride	ND	1.0	15		µg/L	5	12/7/2018 4:10:00 PM	R56157
n-Butylbenzene	ND	1.2	15		µg/L	5	12/7/2018 4:10:00 PM	R56157
n-Propylbenzene	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
sec-Butylbenzene	ND	1.0	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Styrene	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
tert-Butylbenzene	ND	1.1	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1,1,2-Tetrachloroethane	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1,2,2-Tetrachloroethane	ND	1.6	10		µg/L	5	12/7/2018 4:10:00 PM	R56157
Tetrachloroethene (PCE)	ND	0.76	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
trans-1,2-DCE	ND	0.91	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
trans-1,3-Dichloropropene	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2,3-Trichlorobenzene	ND	1.4	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2,4-Trichlorobenzene	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1,1-Trichloroethane	ND	0.82	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,1,2-Trichloroethane	ND	1.2	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Trichloroethene (TCE)	ND	1.3	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Trichlorofluoromethane	ND	0.72	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
1,2,3-Trichloropropane	ND	2.8	10		µg/L	5	12/7/2018 4:10:00 PM	R56157
Vinyl chloride	ND	0.61	5.0		µg/L	5	12/7/2018 4:10:00 PM	R56157
Xylenes, Total	ND	3.2	7.5		µg/L	5	12/7/2018 4:10:00 PM	R56157
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%Rec	5	12/7/2018 4:10:00 PM	R56157
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	5	12/7/2018 4:10:00 PM	R56157
Surr: Dibromofluoromethane	97.9	0	70-130		%Rec	5	12/7/2018 4:10:00 PM	R56157
Surr: Toluene-d8	94.6	0	70-130		%Rec	5	12/7/2018 4:10:00 PM	R56157

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C56770**	RunNo: **56770**
Prep Date:	Analysis Date: **1/3/2019**	SeqNo: **1899700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C56770**	RunNo: **56770**
Prep Date:	Analysis Date: **1/3/2019**	SeqNo: **1899701** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	49	1.0	50.00	0	98.9	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Potassium	50	1.0	50.00	0	99.1	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			

Sample ID **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C56770**	RunNo: **56770**
Prep Date:	Analysis Date: **1/3/2019**	SeqNo: **1899702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0020	0.0020	0.002000	0	98.7	50	150			J
Cadmium	0.0019	0.0020	0.002000	0	96.9	50	150			J
Calcium	0.52	1.0	0.5000	0	103	50	150			J
Chromium	0.0066	0.0060	0.006000	0	110	50	150			
Copper	0.0057	0.0060	0.006000	0	94.6	50	150			J
Iron	0.021	0.020	0.02000	0	105	50	150			
Magnesium	0.52	1.0	0.5000	0	103	50	150			J
Manganese	0.0021	0.0020	0.002000	0	105	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**LLLCS-C**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**C56770**	RunNo:	**56770**					
Prep Date:		Analysis Date:	**1/3/2019**	SeqNo:	**1899702**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	0.52	1.0	0.5000	0	103	50	150			J
Sodium	0.51	1.0	0.5000	0	103	50	150			J

Sample ID	**MB-F**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**F56787**	RunNo:	**56787**					
Prep Date:		Analysis Date:	**1/5/2019**	SeqNo:	**1900550**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LCS-F**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**F56787**	RunNo:	**56787**					
Prep Date:		Analysis Date:	**1/5/2019**	SeqNo:	**1900551**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID	**LLLCS-F**	SampType:	**LCSLL**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**BatchQC**	Batch ID:	**F56787**	RunNo:	**56787**					
Prep Date:		Analysis Date:	**1/5/2019**	SeqNo:	**1900552**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.0048	0.0050	0.005000	0	96.9	50	150			J
Zinc	0.0053	0.010	0.005000	0	106	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB-41906**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **41906**	RunNo: **56188**
Prep Date: **12/5/2018**	Analysis Date: **12/7/2018**	SeqNo: **1876896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-41906**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **41906**	RunNo: **56188**
Prep Date: **12/5/2018**	Analysis Date: **12/7/2018**	SeqNo: **1876897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.7	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.49	0.0020	0.5000	0	97.1	85	115			
Silver	0.093	0.0050	0.1000	0	93.0	85	115			
Zinc	0.48	0.010	0.5000	0	95.3	85	115			

Sample ID **LLLCS-41906**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **41906**	RunNo: **56188**
Prep Date: **12/5/2018**	Analysis Date: **12/7/2018**	SeqNo: **1876898** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.0021	0.0020	0.002000	0	103	50	150			
Cadmium	0.0020	0.0020	0.002000	0	101	50	150			
Chromium	0.0064	0.0060	0.006000	0	107	50	150			
Copper	0.0060	0.0060	0.006000	0	99.4	50	150			J
Iron	0.022	0.020	0.02000	0	110	50	150			
Manganese	0.0022	0.0020	0.002000	0	110	50	150			
Silver	0.0044	0.0050	0.005000	0	88.2	50	150			J
Zinc	0.0073	0.010	0.005000	0	145	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00097	0.0010	0.001000	0	96.5	50	150			J
Lead	0.00049	0.00050	0.0005000	0	98.0	50	150			J
Selenium	0.00089	0.0010	0.001000	0	89.0	50	150			J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D56272**	RunNo: **56272**
Prep Date:	Analysis Date: **12/12/2018**	SeqNo: **1880777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.5	85	115			
Lead	0.012	0.00050	0.01250	0	96.6	85	115			
Selenium	0.025	0.0010	0.02500	0	98.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41906**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**41906**	RunNo:	**56252**					
Prep Date:	**12/5/2018**	Analysis Date:	**12/11/2018**	SeqNo:	**1879152**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID	**MSLLLCS-41906**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**BatchQC**	Batch ID:	**41906**	RunNo:	**56252**					
Prep Date:	**12/5/2018**	Analysis Date:	**12/11/2018**	SeqNo:	**1879154**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	106	50	150			
Lead	0.00048	0.00050	0.0005000	0	95.6	50	150			J
Selenium	0.0011	0.0010	0.001000	0	111	50	150			

Sample ID	**MSLCS-41906**	SampType:	**LCS**	TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**LCSW**	Batch ID:	**41906**	RunNo:	**56252**					
Prep Date:	**12/5/2018**	Analysis Date:	**12/11/2018**	SeqNo:	**1879156**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Lead	0.012	0.00050	0.01250	0	98.0	85	115			
Selenium	0.025	0.0010	0.02500	0	99.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-42108**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**42108**	RunNo:	**56350**					
Prep Date:	**12/13/2018**	Analysis Date:	**12/14/2018**	SeqNo:	**1883617**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000050	0.00020								J

Sample ID	**LCS-42108**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**42108**	RunNo:	**56350**					
Prep Date:	**12/13/2018**	Analysis Date:	**12/14/2018**	SeqNo:	**1883618**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R56119**	RunNo: **56119**
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1874685** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	0.13	0.50								J

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R56119**	RunNo: **56119**
Prep Date:	Analysis Date: **12/5/2018**	SeqNo: **1874686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.9	0.50	5.000	0	98.1	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Bromide	2.5	0.10	2.500	0	99.2	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	10	0.50	10.00	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**MB-41942**	SampType:	**MBLK**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**PBW**	Batch ID:	**41942**	RunNo:	**56195**					
Prep Date:	**12/7/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1877196**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID	**LCS-41942**	SampType:	**LCS**	TestCode:	**EPA Method 8011/504.1: EDB**					
Client ID:	**LCSW**	Batch ID:	**41942**	RunNo:	**56195**					
Prep Date:	**12/7/2018**	Analysis Date:	**12/7/2018**	SeqNo:	**1877198**	Units:	**µg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.11	0.010	0.1000	0	106	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **LCS-41963**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **LCSW**	Batch ID: **41963**	RunNo: **56213**
Prep Date: **12/7/2018**	Analysis Date: **12/10/2018**	SeqNo: **1877824** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	101	70	130			
Surr: DNOP	0.46		0.5000		92.5	76.7	135			

Sample ID **MB-41963**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range**
Client ID: **PBW**	Batch ID: **41963**	RunNo: **56213**
Prep Date: **12/7/2018**	Analysis Date: **12/10/2018**	SeqNo: **1877825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		96.4	76.7	135			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **G56130**	RunNo: **56130**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		84.8	72.8	125			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **G56130**	RunNo: **56130**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	77.7	130			
Surr: BFB	21		20.00		107	72.8	125			

Sample ID **1812130-003AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-63**	Batch ID: **G56130**	RunNo: **56130**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	51	2.5	25.00	25.63	100	65.4	140			
Surr: BFB	1100		1000		114	72.8	125			

Sample ID **1812130-003AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **OW-63**	Batch ID: **G56130**	RunNo: **56130**
Prep Date:	Analysis Date: **12/6/2018**	SeqNo: **1875724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	50	2.5	25.00	25.63	96.1	65.4	140	1.97	20	
Surr: BFB	1200		1000		116	72.8	125	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R56157**	RunNo: **56157**
Prep Date:	Analysis Date: **12/7/2018**	SeqNo: **1877375** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	19	1.0	20.00	0	93.0	70	130			
Chlorobenzene	19	1.0	20.00	0	94.3	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.1		10.00		91.0	70	130			

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56157**	RunNo: **56157**
Prep Date:	Analysis Date: **12/7/2018**	SeqNo: **1877376** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56157**	RunNo: **56157**
Prep Date:	Analysis Date: **12/7/2018**	SeqNo: **1877376** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R56157**	RunNo: **56157**
Prep Date:	Analysis Date: **12/7/2018**	SeqNo: **1877376** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.5	70	130			
Surr: Toluene-d8	9.2		10.00		92.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **lcs-41932**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **41932**	RunNo: **56258**
Prep Date: **12/6/2018**	Analysis Date: **12/11/2018**	SeqNo: **1879399** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.5	55.1	104			
4-Chloro-3-methylphenol	160	10	200.0	0	79.0	57	115			
2-Chlorophenol	150	10	200.0	0	73.9	43.4	112			
1,4-Dichlorobenzene	59	10	100.0	0	58.6	38	95.2			
2,4-Dinitrotoluene	66	10	100.0	0	66.1	55.1	96.7			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.3	55	112			
4-Nitrophenol	98	10	200.0	0	49.0	16.6	93			
Pentachlorophenol	110	20	200.0	0	53.5	43.2	104			
Phenol	120	10	200.0	0	58.8	21.3	85.7			
Pyrene	74	10	100.0	0	74.0	64.9	105			
1,2,4-Trichlorobenzene	64	10	100.0	0	64.5	42.6	107			
Surr: 2-Fluorophenol	130		200.0		64.6	15	74.1			
Surr: Phenol-d5	120		200.0		58.2	15	59.8			
Surr: 2,4,6-Tribromophenol	140		200.0		72.0	22.1	112			
Surr: Nitrobenzene-d5	78		100.0		77.9	33.2	94			
Surr: 2-Fluorobiphenyl	67		100.0		67.5	34	90.9			
Surr: 4-Terphenyl-d14	70		100.0		69.6	15	149			

Sample ID **lcsd-41932**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **41932**	RunNo: **56258**
Prep Date: **12/6/2018**	Analysis Date: **12/11/2018**	SeqNo: **1879400** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	61	10	100.0	0	61.2	55.1	104	2.00	34.9	
4-Chloro-3-methylphenol	160	10	200.0	0	80.4	57	115	1.69	30.2	
2-Chlorophenol	140	10	200.0	0	71.5	43.4	112	3.32	49.5	
1,4-Dichlorobenzene	58	10	100.0	0	58.0	38	95.2	1.13	43.2	
2,4-Dinitrotoluene	66	10	100.0	0	66.1	55.1	96.7	0.0605	49.9	
N-Nitrosodi-n-propylamine	82	10	100.0	0	81.7	55	112	2.93	42.1	
4-Nitrophenol	110	10	200.0	0	57.2	16.6	93	15.5	31.5	
Pentachlorophenol	120	20	200.0	0	59.9	43.2	104	11.4	52.5	
Phenol	120	10	200.0	0	60.2	21.3	85.7	2.28	54.4	
Pyrene	79	10	100.0	0	78.8	64.9	105	6.34	30.7	
1,2,4-Trichlorobenzene	64	10	100.0	0	63.6	42.6	107	1.28	48.1	
Surr: 2-Fluorophenol	130		200.0		63.7	15	74.1	0	0	
Surr: Phenol-d5	120		200.0		60.4	15	59.8	0	0	S
Surr: 2,4,6-Tribromophenol	140		200.0		72.1	22.1	112	0	0	
Surr: Nitrobenzene-d5	76		100.0		75.6	33.2	94	0	0	
Surr: 2-Fluorobiphenyl	68		100.0		68.4	34	90.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID	**lcsd-41932**	SampType:	**LCSD**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**41932**		RunNo:	**56258**				
Prep Date:	**12/6/2018**	Analysis Date:	**12/11/2018**		SeqNo:	**1879400**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	71		100.0		71.1	15	149	0	0	

Sample ID	**mb-41932**	SampType:	**MBLK**		TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**41932**		RunNo:	**56258**				
Prep Date:	**12/6/2018**	Analysis Date:	**12/11/2018**		SeqNo:	**1879401**	Units:	**µg/L**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	16	20								J
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	17	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**

09-Jan-19

Client: MARATHON GALLUP

Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41932**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41932**	RunNo: **56258**
Prep Date: **12/6/2018**	Analysis Date: **12/11/2018**	SeqNo: **1879401** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	8.0	20								J
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1812130**
09-Jan-19

Client: MARATHON GALLUP
Project: 2018 4th Qtr GW Sampling

Sample ID **mb-41932**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW**	Batch ID: **41932**	RunNo: **56258**
Prep Date: **12/6/2018**	Analysis Date: **12/11/2018**	SeqNo: **1879401** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		62.0	15	74.1			
Surr: Phenol-d5	120		200.0		57.8	15	59.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.4	22.1	112			
Surr: Nitrobenzene-d5	73		100.0		72.8	33.2	94			
Surr: 2-Fluorobiphenyl	62		100.0		61.8	34	90.9			
Surr: 4-Terphenyl-d14	72		100.0		71.5	15	149			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: MARATHON GALLUP Work Order Number: 1812130 RcptNo: 1

Received By: Leah Baca 12/4/2018 12:00:00 PM Leah Baca

Completed By: Anne Thorne 12/5/2018 11:08:23 AM Anne Thorne

Reviewed By: JC 12.5.18

CB: DAD 12/5/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 4
(2 or >12 unless noted)
Adjusted? NO
Checked by: DAD 12/5/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

CUSTODY SEALS INTACT ON SAMPLE BOTTLES/at 12/5/18

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			

Chain-of-Custody Record

Client: Marathon Petroleum

GALLUP REFINERY

Mailing Address: 92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

Email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard X Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2018 4th Qtr GW Sampling

OW-30 / RESAMPLE OW-63

Project Manager:

C JOHNSON

(CAJohnson1@Marathonpetroleum.com)

Sampler: C. JOHNSON

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8 -0.8 = 3.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1812130	8260+MTBE	8015D EXTENDED(DRO/MRO)	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	8011/504.1 FOR EDB	CYANIDE	Air Bubbles (Y or N)
12/3/2018	700	AQUEOUS	Field Blank	3-40ml VOAs	HCL	001	X								
12/3/2018	700	AQUEOUS	Trip Blank	3-40ml VOAs	HCL	002	X								
12/3/2018	1500	AQUEOUS	OW-63	MISC	MISC	003	X	X	X	X	X	X			
12/3/2018	1600	AQUEOUS	OW-30	MISC	MISC	004	X	X		X	X		X		

Date: 12/4/18 Time: 1200 Relinquished by:

Received by: Client Date Time 12/4/18 1200

Date: Time: Relinquished by:

Received by: Date Time

Remarks: WQCC METALS TO INCLUDE RCRA 8 METALS MINUS URANIUM, INCLUDES MERCURY (RESAMPLED OW-63 - DID NOT SEND COMPLETE BOTTLE SETS IN FIRST SAMPLE EVENT OF 11-28-18)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX I
GROUNDWATER DATA VALIDATION
(ON ATTACHED CD)

1.0 DATA VALIDATION INTRODUCTION

This summary presents data verification results for groundwater and surface water sampling activities conducted in 2018 at the Gallup Refinery pursuant to Section IV.L of Final RCRA Permit No. NM000333211 (Modified September 2017). The data review was performed in accordance with the procedures specified in the USEPA Functional Guidelines for Organic and Inorganic Data Review, and quality assurance and control parameters set by the project laboratory Hall Environmental Analysis Laboratory, Inc.

The samples evaluated include groundwater samples collected from monitoring wells in five separate groups (Group A thru Group E). There are three leak detection units (LDUs) at the new API Separator. These LDU units are located in Group B. Surface water samples are collected from the evaporation ponds and from the STP1 to EP-2 outfall.

Groundwater samples were collected 240 times during the quarterly, semiannual and annual sampling events in 2018. Surface water samples were collected during the quarterly, semiannual and annual sampling events 46 times. Samples from the LDUs were collected four times in 2018. All samples were submitted to Hall Environmental Analysis Laboratory (HEAL). HEAL subcontracts One Lab Nationwide for the analysis of cyanide and chemical oxygen demand (COD).

The samples from each location were analyzed for a specific list of parameters. Those parameters generally consisted of one or more of the following parameters:

- Volatile organic compounds (VOCs) by USEPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by USEPA Method 8270C
- Gasoline, diesel, and motor oil range organics by SW-846 Method 8015B;
- Total metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, uranium, vanadium, and zinc) and dissolved metals (antimony, arsenic, barium, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, potassium, selenium, silver, sodium, uranium, and zinc) by SW846 Method 6010B/E200.7 and E200.8;
- Anions (bromide, chloride, fluoride, nitrogen-nitrite (As N), nitrogen-nitrate (As N), bromide, phosphorus and sulfate) by EPA Method 300.0;
- Mercury by EPA Method 245.1;
- Cyanide by EPA Method 4500CN E-2011;
- pH (Method 4500-H+B);
- Specific conductance (SM 2510B); and
- Total dissolved solids (USEPA Method 2510B).

Surface water samples were also analyzed for E. Coli (SM9223B), biochemical oxygen demand (SM5210B), chemical oxygen demand (Method 410.4), and pesticides (USEPA Method 8081).

Additionally, 174 quality assurance samples consisting of trip blanks, field blanks, equipment rinsate blanks, and field duplicates were collected and analyzed as part of the investigation activities. Table H-1 presents a summary of the field sample identifications, laboratory sample identifications, and sample collection dates.

2.0 QUALITY CONTROL PARAMETERS REVIEWED

Sample results were subject to a Level II data review that includes an evaluation of the following quality control (QC) parameters:

- Chain-of-Custody;
- Sample Preservation and Temperature Upon Laboratory Receipt
- Holding Times;
- Blank Contamination (method blanks, trip blanks, field blanks, and equipment rinsate blanks);
- Surrogate Recovery (for organic parameters);
- Laboratory Control Sample (LCS) Recovery and Relative Percent Difference (RPD);
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recovery and RPD;
- Duplicates (field duplicate, laboratory duplicate); and
- Other Applicable QC Parameters.

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established data quality objectives are defined below:

J+	The analyte was positively identified; however, the result should be considered an estimated value with a potential high bias.
J-	The analyte was positively identified; however, the result should be considered an estimated value with a potential low bias.
UJ	The reporting limit for a constituent that was not detected is considered an estimated value.
R	Quality control indicates that the data is not usable.

Results qualified as "J+", "J-", or "UJ" are of acceptable data quality and may be used quantitatively to fulfill the objectives of the analytical program, per EPA guidelines.

Results for the performance monitoring events that required qualification based on the data verification are summarized in Table H-2.

2.1 CHAIN-OF-CUSTODY

The chain-of-custody documentation associated with project samples was found to be complete. Chain-of-custodies included sample identifications, date and time of collection, requested parameters, and relinquished/received signatures.

2.2 SAMPLE PRESERVATION AND TEMPERATURE UPON LABORATORY RECEIPT

Samples were received by the laboratory at a temperature of 6.0 degrees Celsius or lower. Data qualification on lower temperature samples was not required. Samples collected were received preserved and intact by Hall Environmental Laboratories, Inc. with the following exceptions:

Lab Report 1802819

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for West LDU to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1802938

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for DUP07 to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1809C83

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for PW-3 to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1809227

- The lab added 0.5 ml HNO_3 to the 125 ml sample containers for MKTF-04, MKTF-11, and DUP11 to achieve the acceptable pH. The containers were held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1809409

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for OAPIS-1 to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1809712

- One VOA vial for the 8260 analysis from the Trip Blank was received broken. The data was not qualified.

Lab Report 1811A37

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for OAPIS-1 to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1811D80

- The 8260 analytical results for MKTF-18 were flagged “P” (sample pH not in range). The sample was analyzed within 7 days from collection. The data was not qualified.

Lab Report 1811442

- The lab added 0.5 ml HNO_3 to the 125 ml sample container for OW-56 to achieve the acceptable pH. The container was held for 24 hours prior to dissolved metals analysis. The data was not qualified.

Lab Report 1811857

- One VOA vial for the 8011 analysis from MKTF-32 was received broken. The data was not qualified.

2.3 HOLDING TIMES

All samples were extracted and analyzed within method-specified holding time limits with the exception of some samples analyzed for phosphorus, pH and nitrogen/nitrite (as N). Since analyses were conducted in a reasonable time period after collection of samples and samples were properly preserved, the data was accepted but was flagged as estimated with a potential low bias. Data qualification for exceeding holding times is shown on Table H-2.

Sample MKTF-13 (Lab Report 1808J13-007/Lab Batch ID 40294/3rd Quarter) formed a heavy emulsion during the extraction process. The surrogate recoveries are low due to this emulsion. The sample was re-extracted, past the holding time, to confirm the low surrogate recoveries and the data results. The second analysis results for naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene was flagged “H” (holding times for preparation or analysis exceeded). The lab recommended that naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene data be used from the Method 8260 analysis. The data was qualified “R” (unusable) in Table H-2.

2.4 BLANK CONTAMINATION

2.4.1 Method Blank

Method blanks were analyzed at the appropriate frequency. Target compounds were not detected in the method blanks with the following exceptions:

- Lab Report 1802C47 – Benzoic Acid - 8.8 ug/L - Lab Batch ID 36704;
- Lab Report 1802C47 – Cadmium (Total) - 0.0012 mg/L - Lab Batch ID 36876;
- Lab Report 1802C47 – Mercury - 0.000054 mg/L - Lab Batch ID 36861;
- Lab Report 1802C78 – Copper (Total) - 0.0054 mg/L - Lab Batch ID 36893;
- Lab Report 1802C78 – Zinc (Total) - 0.0034 mg/L - Lab Batch ID 36893;
- Lab Report 1802C78 – Phosphorus - 0.27 mg/L - Lab Batch ID R49381;
- Lab Report 1802C78 – Sulfate - 0.10 mg/L - Lab Batch ID R49381;
- Lab Report 1802C78 – Methylene Chloride - 0.30 mg/L - Lab Batch ID A49468;
- Lab Report 1802C48 – Benzoic Acid - 8.8 ug/L - Lab Batch ID 36704;

- Lab Report 1802D25 – Chromium (Dissolved) – 0.0013 mg/L - Lab Batch ID A49766;
- Lab Report 1802D25 – Phosphorus - 0.30 mg/L - Lab Batch ID R49381;
- Lab Report 1802D25 – Methylene Chloride - 0.30 mg/L - Lab Batch ID A49468;
- Lab Report 1802D25 – Benzoic Acid - 8.8 ug/L - Lab Batch ID 36704;
- Lab Report 1802D26 – Chromium (Dissolved)– 0.0013 mg/L - Lab Batch ID A49766;
- Lab Report 1802D26 – Mercury - 0.000040 mg/L - Lab Batch ID 36955;
- Lab Report 1802D26 – Phosphorus - 0.30 mg/L - Lab Batch ID R49381;
- Lab Report 1802D26 – Benzoic Acid - 8.8 ug/L - Lab Batch ID 36704;
- Lab Report 1802E43 – Copper (Total) - 0.0054 mg/L - Lab Batch ID 36893
- Lab Report 1802C78 – Zinc (Total) - 0.0034 mg/L - Lab Batch ID 36893;
- Lab Report 1802E43 – Mercury - 0.000040 mg/L - Lab Batch ID 36955;
- Lab Report 1802E43 – Methylene Chloride - 0.30 mg/L - Lab Batch ID A49468;
- Lab Report 1802E43 – Benzoic Acid – 7.6 ug/L - Lab Batch ID 36823;
- Lab Report 1802370 – Chromium (Dissolved)– 0.0015 mg/L - Lab Batch ID A49000;
- Lab Report 1802370 – Mercury - 0.000062 mg/L - Lab Batch ID 36617;
- Lab Report 1802370 – Sulfate - 0.13 mg/L - Lab Batch ID R49315;
- Lab Report 1802E43 – Benzoic Acid – 5.8 ug/L - Lab Batch ID 36419;
- Lab Report 1802570 – Mercury - 0.000064 mg/L - Lab Batch ID 36668;
- Lab Report 1802570 – Phosphorus - 0.33 mg/L - Lab Batch ID R49314;
- Lab Report 1802570 – Benzoic Acid – 7.4 ug/L - Lab Batch ID 36488;
- Lab Report 1802641 – Cadmium (Total) - 0.00067 mg/L - Lab Batch ID 36678;
- Lab Report 1802641 – Mercury - 0.000077 mg/L - Lab Batch ID 36669;
- Lab Report 1802641 – Sulfate - 0.17 mg/L - Lab Batch ID R49437;
- Lab Report 1802641 – Benzoic Acid – 6.9 ug/L - Lab Batch ID 36490;
- Lab Report 1802641 – Benzoic Acid – 7.4 ug/L - Lab Batch ID 36488;
- Lab Report 1802642 – Silver (Total) - 0.0029 mg/L - Lab Batch ID 36678;
- Lab Report 1802642 – Cadmium (Total) - 0.00067 mg/L - Lab Batch ID 36678;
- Lab Report 1802642 – Mercury - 0.000077 mg/L - Lab Batch ID 36669;
- Lab Report 1802642 – Sulfate - 0.17 mg/L - Lab Batch ID R49437;
- Lab Report 1802642 – Benzoic Acid – 6.9 ug/L - Lab Batch ID 36490;
- Lab Report 1802816 – Methylene Chloride - 0.18 mg/L - Lab Batch ID R49200;
- Lab Report 1802818 – Cadmium (Total) - 0.00066 mg/L - Lab Batch ID 36710;
- Lab Report 1802818 – Mercury - 0.000096 mg/L - Lab Batch ID 36731;
- Lab Report 1802818 – Methylene Chloride - 0.18 mg/L - Lab Batch ID R49200;

- Lab Report 1802818 – Benzoic Acid – 6.1 ug/L - Lab Batch ID 36560;
- Lab Report 1802819 – Methylene Chloride - 0.18 mg/L - Lab Batch ID R49200;
- Lab Report 1802819 – Cadmium (Total) - 0.00066 mg/L - Lab Batch ID 36710;
- Lab Report 1802938 – Benzoic Acid – 6.1 ug/L - Lab Batch ID 36560;
- Lab Report 1802951 – Benzoic Acid – 11 ug/L - Lab Batch ID 36609;
- Lab Report 1803047 – Cadmium (Total) - 0.0012 mg/L - Lab Batch ID 36876;
- Lab Report 1803047 – Mercury - 0.000054 mg/L - Lab Batch ID 36861;
- Lab Report 1803047 – 1-Methylnaphthalene – 0.53 ug/L - Lab Batch ID W49500;
- Lab Report 1803047 – Methylene Chloride - 0.29 mg/L - Lab Batch ID R49500;
- Lab Report 1803072 – Copper (Total) - 0.0054 mg/L - Lab Batch ID 36893;
- Lab Report 1803072 – Zinc (Total) - 0.0034 mg/L - Lab Batch ID 36893;
- Lab Report 1803072 – Mercury - 0.000040 mg/L - Lab Batch ID 36955;
- Lab Report 1803072 – Phosphorus - 0.29 mg/L - Lab Batch ID R49514;
- Lab Report 1803072 – Sulfate - 0.11 mg/L - Lab Batch ID R49514;
- Lab Report 1803072 – Naphthalene – 0.36 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – 1-Methylnaphthalene – 0.80 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – 2-Methylnaphthalene – 0.72 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – n-Butylbenzene - 0.15 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – 1,2,3-Trichlorobenzene – 0.33 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – 1,2,4-Trichlorobenzene – 0.35 ug/L - Lab Batch ID W49527;
- Lab Report 1803072 – Benzoic Acid – 7.6 ug/L - Lab Batch ID 36823;
- Lab Report 1803089 – Copper (Total) - 0.0054 mg/L - Lab Batch ID 36893;
- Lab Report 1803089 – Zinc (Total) - 0.0034 mg/L - Lab Batch ID 36893;
- Lab Report 1805A27 – Mercury - 0.000044 mg/L - Lab Batch ID 51755;
- Lab Report 1805A27 – Benzene - 0.070 ug/L - Lab Batch ID R51416;
- Lab Report 1805106 – Benzene - 0.070 ug/L - Lab Batch ID SL51242;
- Lab Report 1805106 – 1,2,4-Trimethylbenzene - 0.25 ug/L - Lab Batch ID W51196;
- Lab Report 1805106 – Benzene - 0.070 ug/L - Lab Batch ID R51242;
- Lab Report 1805106 – 2-Methylnaphthalene – 0.31 ug/L - Lab Batch ID R51242;
- Lab Report 1805106 – Chlorobenzene - 0.12 ug/L - Lab Batch ID R51242;
- Lab Report 1805106 – Benzoic Acid – 14 ug/L - Lab Batch ID 37947;
- Lab Report 1805A27 – Mercury - 0.000066 mg/L - Lab Batch ID 38118;
- Lab Report 1805201 – Chloride - 0.34 mg/L - Lab Batch ID R51040;

- Lab Report 1805201 – Phosphorus - 0.18 mg/L - Lab Batch ID R51040;
- Lab Report 1805201 – Chloride - 0.12 mg/L - Lab Batch ID R51131;
- Lab Report 1805201 – Phosphorus - 0.11 mg/L - Lab Batch ID R51131;
- Lab Report 1805201 – Benzoic Acid – 14 ug/L - Lab Batch ID 37947;
- Lab Report 1805275 – Mercury - 0.000040 mg/L - Lab Batch ID 38215;
- Lab Report 1805275 – Chloride - 0.24 mg/L - Lab Batch ID R51385;
- Lab Report 1805275 – Toluene – 0.068 ug/L - Lab Batch ID R51191;
- Lab Report 1805275 – Naphthalene – 0.13 ug/L - Lab Batch ID R51191;
- Lab Report 1805275 – 1-Methylnaphthalene – 0.29 ug/L - Lab Batch ID R51191;
- Lab Report 1805275 – 2-Methylnaphthalene – 0.34 ug/L - Lab Batch ID R51191;
- Lab Report 1805275 – Chlorobenzene – 0.15 ug/L - Lab Batch ID R51191;
- Lab Report 1805275 – Benzene – 0.070 ug/L - Lab Batch ID R51242;
- Lab Report 1805275 – 2-Methylnaphthalene – 0.31 ug/L - Lab Batch ID R51242;
- Lab Report 1805275 – Chlorobenzene – 0.12 ug/L - Lab Batch ID R51242;
- Lab Report 1805275 – Benzoic Acid – 10 ug/L - Lab Batch ID 38002;
- Lab Report 1805323 – Sodium (Dissolved) - 0.17 mg/L - Lab Batch ID B51451;
- Lab Report 1805323 – Calcium (Dissolved) - 0.34 mg/L - Lab Batch ID A51451;
- Lab Report 1805323 – Phosphorus - 0.14 mg/L - Lab Batch ID R51062;
- Lab Report 1805323 – Phosphorus - 0.31 mg/L - Lab Batch ID R51063;
- Lab Report 1805323 – Sulfate - 0.21 mg/L - Lab Batch ID R51063;
- Lab Report 1805323 – Toluene – 0.068 ug/L - Lab Batch ID R51191;
- Lab Report 1805323 – Naphthalene – 0.13 ug/L - Lab Batch ID R51191;
- Lab Report 1805323 – 1-Methylnaphthalene – 0.29 ug/L - Lab Batch ID R51191;
- Lab Report 1805323 – 2-Methylnaphthalene – 0.34 ug/L - Lab Batch ID R51191;
- Lab Report 1805323 – Chlorobenzene – 0.15 ug/L - Lab Batch ID R51191;
- Lab Report 1805323 – Benzene – 0.070 ug/L - Lab Batch ID R51242;
- Lab Report 1805323 – 2-Methylnaphthalene – 0.31 ug/L - Lab Batch ID R51242;
- Lab Report 1805323 – Chlorobenzene – 0.12 ug/L - Lab Batch ID R51242;
- Lab Report 1805323 – Benzoic Acid – 10 ug/L - Lab Batch ID 38002;
- Lab Report 1805323 – Benzoic Acid – 15 ug/L - Lab Batch ID 38063;
- Lab Report 1805416 – Mercury - 0.000038 mg/L - Lab Batch ID 38233;
- Lab Report 1805416 – Chloride - 0.12 mg/L - Lab Batch ID R51131;
- Lab Report 1805416 – Phosphorus - 0.11 mg/L - Lab Batch ID R51131;

- Lab Report 1805416 – Benzene – 0.070 ug/L - Lab Batch ID R51242;
- Lab Report 1805416 – 2-Methylnaphthalene – 0.31 ug/L - Lab Batch ID R51242;
- Lab Report 1805416 – Chlorobenzene – 0.12 ug/L - Lab Batch ID R51242;
- Lab Report 1805416 – Benzene – 0.070 ug/L - Lab Batch ID B51242;
- Lab Report 1805416 – 2-Methylnaphthalene – 0.28 ug/L - Lab Batch ID B51242;
- Lab Report 1805416 – Chlorobenzene – 0.11 ug/L - Lab Batch ID B51242;
- Lab Report 1805416 – Benzoic Acid – 15 ug/L - Lab Batch ID 38063;
- Lab Report 1805523 – Mercury - 0.000038 mg/L - Lab Batch ID 38233;
- Lab Report 1805523 – Phosphorus - 0.18 mg/L - Lab Batch ID A51144;
- Lab Report 1805523 – Sulfate - 0.29 mg/L - Lab Batch ID A51144;
- Lab Report 1805523 – Phosphorus - 0.18 mg/L - Lab Batch ID B51144;
- Lab Report 1805523 – Sulfate - 0.22 mg/L - Lab Batch ID B51144;
- Lab Report 1805523 – Chloride - 0.19 mg/L - Lab Batch ID R51212;
- Lab Report 1805523 – Chloride - 0.12 mg/L - Lab Batch ID R51493;
- Lab Report 1805523 – 2-Butanone – 1.8 ug/L - Lab Batch ID A51325;
- Lab Report 1805523 – Benzoic Acid – 15 ug/L - Lab Batch ID 38063;
- Lab Report 1805651 – Barium (Dissolved) - 0.0013 mg/L - Lab Batch ID C51646;
- Lab Report 1805651 – Calcium (Dissolved) - 0.18 mg/L - Lab Batch ID C51646;
- Lab Report 1805651 – Mercury – 0.000055 mg/L - Lab Batch ID 38431;
- Lab Report 1805651 – Phosphorus - 0.19 mg/L - Lab Batch ID R51122;
- Lab Report 1805651 – Chloride - 0.11 mg/L - Lab Batch ID R51286;
- Lab Report 1805651 – Benzene – 0.078 ug/L - Lab Batch ID R51293;
- Lab Report 1805651 – 1-Methylnaphthalene – 0.32 ug/L - Lab Batch ID R51293;
- Lab Report 1805651 – 2-Methylnaphthalene – 0.33 ug/L - Lab Batch ID R51293;
- Lab Report 1805651 – Chlorobenzene – 0.14 ug/L - Lab Batch ID R51293;
- Lab Report 1805682 – Calcium (Dissolved) – 0.18 mg/L - Lab Batch ID C51646;
- Lab Report 1805682 – Sodium (Dissolved) – 0.17 mg/L - Lab Batch ID C51646;
- Lab Report 1805682 – Mercury – 0.000055 mg/L - Lab Batch ID 38431;
- Lab Report 1805682 – Benzene – 0.078 ug/L - Lab Batch ID R51363;
- Lab Report 1805682 – Naphthalene – 0.12 ug/L - Lab Batch ID R51363;
- Lab Report 1805682 – 1-Methylnaphthalene – 0.32 ug/L - Lab Batch ID R51363;
- Lab Report 1805682 – 2-Methylnaphthalene – 0.33 ug/L - Lab Batch ID R51363;
- Lab Report 1805682 – Chlorobenzene – 0.13 ug/L - Lab Batch ID R51363;

- Lab Report 1805682 – Methylene Chloride – 0.14 ug/L - Lab Batch ID R51363;
- Lab Report 1805682 – Benzoic Acid – 13 ug/L - Lab Batch ID 38192;
- Lab Report 1805872 – 2-Butanone – 1.9 ug/L - Lab Batch ID W51418;
- Lab Report 1805872 – Chlorobenzene – 0.18 ug/L - Lab Batch ID W51418;
- Lab Report 1805872 – Methylene Chloride – 0.34 ug/L - Lab Batch ID W51418;
- Lab Report 1805872 – Benzoic Acid – 13 ug/L - Lab Batch ID 38192;
- Lab Report 1805972 – Mercury – 0.000085 mg/L - Lab Batch ID 38266;
- Lab Report 1805972 – Chloride – 0.22 mg/L - Lab Batch ID R51607;
- Lab Report 1805972 – Phosphorus - 0.19 mg/L - Lab Batch ID R51607;
- Lab Report 1805972 – 2-Butanone – 1.9 ug/L - Lab Batch ID W51418;
- Lab Report 1805972 – Chlorobenzene – 0.18 ug/L - Lab Batch ID W51418;
- Lab Report 1805972 – Methylene Chloride – 0.34 ug/L - Lab Batch ID W51418;
- Lab Report 1808B32 – Mercury – 0.000057 mg/L - Lab Batch ID 40198;
- Lab Report 1808B32 – Chloride – 0.20 mg/L - Lab Batch ID A53556;
- Lab Report 1808B32 – Sulfate – 0.27 mg/L - Lab Batch ID A53556;
- Lab Report 1808B32 – Benzoic Acid – 6.4 ug/L - Lab Batch ID 39925;
- Lab Report 1808B32 – Gasoline Range Organics – 0.016 mg/L - Lab Batch ID G53574;
- Lab Report 1808D32 – Chloride – 0.19 mg/L - Lab Batch ID A53658;
- Lab Report 1808D32 – Phosphorus - 0.25 mg/L - Lab Batch ID A53658;
- Lab Report 1808D32 – Benzoic Acid – 7.4 ug/L - Lab Batch ID 39989. The surrogates 2-fluorophenol and phenol-d5 were flagged “S” (% recovery outside of range due to dilution or matrix);
- Lab Report 1808D32 – Gasoline Range Organics – 0.016 mg/L - Lab Batch ID G53662;
- Lab Report 1808E67 – Mercury – 0.000067 mg/L - Lab Batch ID 40221;
- Lab Report 1808E67 – Phosphorus - 0.25 mg/L - Lab Batch ID R53678;
- Lab Report 1808E67 – Sulfate - 0.21 mg/L - Lab Batch ID R53678;
- Lab Report 1808E67 – Chloride - 0.29 mg/L - Lab Batch ID R53881;
- Lab Report 1808E67– Benzoic Acid – 7.4 ug/L - Lab Batch ID 39989. The surrogates 2-fluorophenol and phenol-d5 were flagged “S” (% recovery outside of range due to dilution or matrix);
- Lab Report 1808E67 – Gasoline Range Organics – 0.016 mg/L - Lab Batch ID G53662;
- Lab Report 1808F16 – Mercury – 0.000050 mg/L - Lab Batch ID 40249;
- Lab Report 1808F16 – Nitrate+Nitrite as N – 0.10 mg/L - Lab Batch ID R54057;
- Lab Report 1808F16 – Acetone – 3.6 ug/L - Lab Batch ID R53736. The data was flagged “EJ” value above the quantitation range. The acetone results for Lab Batch ID W53736 were

qualified “J+”.

- Lab Report 1808F16 – Benzoic Acid – 6.4 ug/L - Lab Batch ID 40042. The surrogate phenol-d5 was flagged “S”.
- Lab Report 1808F55 – Mercury – 0.000055 mg/L - Lab Batch ID 40340;
- Lab Report 1808F55 – Benzoic Acid – 6.4 ug/L - Lab Batch ID 40042. The surrogate phenol-d5 was flagged “S”.
- Lab Report 1808H79 – Copper (Total) – 0.0052 mg/L - Lab Batch ID 40257;
- Lab Report 1808H79 – Mercury – 0.000077 mg/L - Lab Batch ID 40384;
- Lab Report 1808H79 – Chloride – 0.10 mg/L - Lab Batch ID R53843;
- Lab Report 1808H79 – Nitrate+Nitrite as N – 0.025 mg/L - Lab Batch ID R53843;
- Lab Report 1808H79 – Phosphorus - 0.18 mg/L - Lab Batch ID R53843;
- Lab Report 1808H79 – Carbon disulfide – 0.51 ug/L - Lab Batch ID R53912;
- Lab Report 1808H79 – Benzoic Acid – 7.7 ug/L - Lab Batch ID 40131;
- Lab Report 1808I45 – Copper (Total) – 0.0052 mg/L - Lab Batch ID 40257;
- Lab Report 1808I45 – Mercury – 0.000072 mg/L - Lab Batch ID 40390;
- Lab Report 1808I45 – Benzoic Acid – 7.7 ug/L - Lab Batch ID 40131;
- Lab Report 1808J13 – Zinc (Total) – 0.0044 mg/L - Lab Batch ID 40309;
- Lab Report 1808J13 – 2-Methylnaphthalene – 0.24 ug/L - Lab Batch ID W54003;
- Lab Report 1808J13 – Acetone – 2.7 ug/L - Lab Batch ID W54003;
- Lab Report 1808J13 – Bromomethane – 0.42 ug/L - Lab Batch ID W54032;
- Lab Report 1808J13 – Benzoic Acid – 9.2 ug/L - Lab Batch ID 40141. The surrogate phenol-d5 was flagged “S”.
- Lab Report 1808J13 – Gasoline Range Organics – 0.012 mg/L - Lab Batch ID G54032;
- Lab Report 1809A73 – Bromomethane – 0.28 ug/L - Lab Batch ID A54375;
- Lab Report 1809A73 – Benzoic Acid – 6.4 ug/L - Lab Batch ID 40466;
- Lab Report 1809B69 – Sodium (Dissolved) – 0.29 mg/L - Lab Batch ID B54839;
- Lab Report 1809B69 – Phosphorus - 0.17 mg/L - Lab Batch ID R54671;
- Lab Report 1809B69 – Bromomethane – 0.28 ug/L - Lab Batch ID A54375;
- Lab Report 1809C83 – Phosphorus - 0.20 mg/L - Lab Batch ID R54349;
- Lab Report 1809227 – Benzoic Acid – 7.1 ug/L - Lab Batch ID 40263;
- Lab Report 1809375 – Benzoic Acid – 7.1 ug/L - Lab Batch ID 40263;
- Lab Report 1809409 – Potassium (Dissolved) – 0.12 mg/L - Lab Batch ID B54598;
- Lab Report 1809409 – Sodium (Dissolved) – 0.21 mg/L - Lab Batch ID A55001;
- Lab Report 1809409 – Copper (Total) – 0.0060 mg/L - Lab Batch ID 40361;

- Lab Report 1809409 – Copper (Total) – 0.013 mg/L - Lab Batch ID 40362;
- Lab Report 1809409 – Mercury – 0.000073 mg/L - Lab Batch ID 40617;
- Lab Report 1809409 – Mercury – 0.00014 mg/L - Lab Batch ID 40617;
- Lab Report 1809409 – Mercury – 0.000062 mg/L - Lab Batch ID 40731;
- Lab Report 1809409 – Bromomethane – 0.35 ug/L - Lab Batch ID B54139;
- Lab Report 1809409 – Methylene Chloride – 0.26 ug/L - Lab Batch ID B54139;
- Lab Report 1809409 – Benzoic Acid – 7.2 ug/L - Lab Batch ID 40294;
- Lab Report 1809583 – Mercury – 0.000047 mg/L - Lab Batch ID 40577;
- Lab Report 1809583 – Chloride - 0.31 mg/L - Lab Batch ID R54117;
- Lab Report 1809583 – Phosphorus - 0.18 mg/L - Lab Batch ID R54117;
- Lab Report 1809583 – Bromomethane – 0.33 ug/L - Lab Batch ID A54139;
- Lab Report 1809583 – No constituents were detected in the method blank in Lab Batch ID 40375. The surrogates 2-fluorophenol and phenol-d5 were flagged "S". The surrogates were not flagged in the MS/MSD or the LCS.
- Lab Report 1809712 – Silver - 0.0012 mg/L - Lab Batch ID 40396;
- Lab Report 1809712 – Mercury – 0.000085 mg/L - Lab Batch ID 40576;
- Lab Report 1809712 – Phosphorus - 0.16 mg/L - Lab Batch ID R54173;
- Lab Report 1809712 – 4-Methyl-2-pentanone – 1.4 ug/L - Lab Batch ID R54185;
- Lab Report 1809856 – Phosphorus - 0.13 mg/L - Lab Batch ID R54146;
- Lab Report 1809856 – Phosphorus - 0.17 mg/L - Lab Batch ID R54671;
- Lab Report 1809856 – No constituents were detected in the method blank in Lab Batch ID 40375. The surrogates 2-fluorophenol and phenol-d5 were flagged "S". The surrogates were not flagged in the MS/MSD or the LCS.
- Lab Report 1809884 – Benzoic Acid – 6.4 ug/L - Lab Batch ID 40466;
- Lab Report 1811A37 – Benzoic Acid – 16 ug/L - Lab Batch ID 41702;
- Lab Report 1811A96 – 4-Methyl-2-pentanone – 0.83 ug/L - Lab Batch ID R55969;
- Lab Report 1811A96 – Benzoic Acid – 16 ug/L - Lab Batch ID 41702;
- Lab Report 1811D80 – Benzoic Acid – 16 ug/L - Lab Batch ID 41855;
- Lab Report 1811E76 – Sulfate – 0.14 mg/L - Lab Batch ID R56016;
- Lab Report 1811E76 – Benzoic Acid – 16 ug/L - Lab Batch ID 41855;
- Lab Report 1811442 – 1,2-Dichloroethane – 0.21 ug/L - Lab Batch ID R55556;
- Lab Report 1811442 – Acetone – 0.93 ug/L - Lab Batch ID R55556;
- Lab Report 1811442 – Chloromethane – 0.92 ug/L - Lab Batch ID R55556;
- Lab Report 1811442 – bis(2-ethylhexyl) phthalate – 8.8 ug/L - Lab Batch ID 41498;
- Lab Report 1811496 – Mercury – 0.000063 mg/L - Lab Batch ID 41679;

- Lab Report 1811496 – Mercury – 0.000053 mg/L - Lab Batch ID 41714;
- Lab Report 1811695 – Methylene Chloride – 0.33 ug/L - Lab Batch ID R55666;
- Lab Report 1811857 – Mercury – 0.000044 mg/L - Lab Batch ID 41862;
- Lab Report 1811857 – Sulfate – 0.14 mg/L - Lab Batch ID R55729;
- Lab Report 1812130 – Mercury – 0.000050 mg/L - Lab Batch ID 42108;
- Lab Report 1812130 – Sulfate – 0.13 mg/L - Lab Batch ID R56119; and
- Lab Report 1812130 – 4,6-Dinitro-2-methylphenol – 8.0 ug/L - Lab Batch ID 41932.

2.4.2 Trip Blank

Trip blanks were analyzed and target compounds were not detected in the trip blanks with the following exceptions:

Lab Report 1802D26-007

- Acetone was reported at a detection of 1.0 ug/L. The data was flagged "J" (Analyte detected below quantitation limit). Acetone was not detected in the method blank (Lab Batch ID W49433). The data was not qualified.

Lab Report 1802370-005

- Benzene was reported at a detection of 0.35 ug/L. The data was flagged "J". Benzene was not detected in the method blank (Lab Batch ID W494067). The data was not qualified.

Lab Report 1803047-006

- Acetone was reported at a detection of 2.2 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID W49500). The data was not qualified.

Lab Report 1805106-011

- 1,2-4-Trimethylbenzene was reported at a detection of 0.15 ug/L. The data was flagged "J". 1,2-4-Trimethylbenzene was detected in the method blank (Lab Batch ID W51196) and the sample was qualified "J+".

Lab Report 1805201-010

- Bromomethane was reported at a detection of 0.27 ug/L. The data was flagged "J". Bromomethane was not detected in the method blank (Lab Batch ID W51125). The data was not qualified.

Lab Report 1805416-009

- Benzene was reported at a detection of 0.33 ug/L. The data was flagged "J". Benzene was detected in the method blank (Lab Batch ID R51242) and the data was qualified "J+".

Lab Report 1805651-008

- 1-Methylnaphthalene and 2-methylnaphthalene were reported at detection of 0.72 ug/L and 0.52 ug/L respectively. The data was flagged "J". 1-Methylnaphthalene and 2-

methylnaphthalene were detected in the method blank (Lab Batch ID R51293) and the data was qualified "J+".

Lab Report 1805872-005

- Acetone was reported at a detection of 2.6 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID W51418). The data was not qualified.

Lab Report 1805972-007

- Acetone was reported at a detection of 1.7 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID W51418). The data was not qualified.

Lab Report 1808D32-010

- GRO was reported at a detection of 0.022 mg/L. The data was flagged "J". Acetone was detected in the method blank (Lab Batch ID G53662). The data was qualified "J+".

Lab Report 1808F16-007

- Benzene (0.43 ug/L), naphthalene (0.42 ug/L), 2-methylnaphthalene (0.30 ug/L) and acetone (8.8 ug/L) were detected in the trip blank. The data was flagged "J". Acetone was detected in the method blank (Lab Batch ID R53736). The acetone data was qualified "J+".

Lab Report 1808I45-006

- Naphthalene (0.47 ug/L), 1-methylnaphthalene (0.55 ug/L), and 2-methylnaphthalene (0.51 ug/L) were detected in the trip blank. The data was flagged "J". None of the constituents were detected in the method blank (Lab Batch ID R54051). The data was not qualified.

Lab Report 1809409-017

- Acetone was reported at a detection of 3.2 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID B54139). The data was not qualified.

Lab Report 1809583-005

- 1-Methylnaphthalene (0.38 ug/L), and 2-methylnaphthalene (0.42 ug/L) were detected in the trip blank. The data was flagged "J". None of the constituents were detected in the method blank (Lab Batch ID R54139). The data was not qualified.

Lab Report 1809712-008

- Acetone was reported at a detection of 2.8 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID B54185). The data was not qualified.

Lab Report 1811442-002

- Acetone was reported at a detection of 1.6 ug/L. The data was flagged "J". Acetone was detected in the method blank (Lab Batch ID R55556). The acetone data was qualified "J+".

Lab Report 1811496-001

- Acetone was reported at a detection of 1.6 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID R55623). The acetone data was not qualified.

Lab Report 1811496-005

- Acetone was reported at a detection of 2.3 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID R55623). The acetone data was not qualified.

Lab Report 1811695-001

- Acetone was reported at a detection of 1.7 ug/L. The data was flagged "J". Acetone was not detected in the method blank (Lab Batch ID R55666). The acetone data was not qualified.

2.4.3 Field Blanks/Equipment Rinsate Blank

Field and equipment rinsate blanks were collected and analyzed. Target compounds were not detected in the field blanks or equipment blanks with the following exceptions:

Lab Report 1805028-001 (FB01)

- Phosphorus, Orthophosphate (As P) – <2.5 mg/L. The data was flagged "H" (Holding times for preparation or analysis exceeded). The data was qualified "UJ-".

Lab Report 1805028-002 (EB01)

- Phosphorus, Orthophosphate (As P) – <2.5 mg/L. The data was flagged "H". The data was qualified "UJ-".

Lab Report 1805106-001 (EB02)

- Chloride – 0.57 mg/L. The data was flagged "J" (Analyte detected below quantitation limit). In Lab Batch ID R51220 chloride was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – <2.5 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Manganese (Dissolved) – 0.00041 mg/L vs screening level of 0.2 mg/L. The data was flagged "J". In Lab Batch ID A51375 manganese was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0068 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Cadmium (Total) – 0.00082 mg/L. The data was flagged "J". In Lab Batch ID 37927 cadmium was detected in the method blank and was flagged "J". The data was qualified with "J+".
- Manganese (Total) – 0.0015 mg/L. The data was flagged "J". In Lab Batch ID 37927 manganese was not detected in the method blank. The data was not qualified.

- Silver (Total) – 0.0033 mg/L. The data was flagged "J". In Lab Batch ID 37927 silver was not detected in the method blank. The data was not qualified.
- 1,2,4-Trimethylbenzene – 0.20 ug/L. The data was flagged "J". In Lab Batch ID W51196 1,2,4-Trimethylbenzene was detected in the method blank. The data was qualified with "J+".
- Acetone – 3.6 ug/L. The data was flagged "J". In Lab Batch ID W51196 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805106-001 (FB02)

- Chloride – 0.56 mg/L. The data was flagged "J". In Lab Batch ID R51220 chloride was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – <2.5 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Zinc (Dissolved) – 0.0077 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Selenium (Dissolved) – 0.0060 mg/L. In Lab Batch ID B51024 selenium was not detected in the method blank. The data was not qualified.
- Toluene – 0.078 ug/L. The data was flagged "J". In Lab Batch ID W51196 toluene was not detected in the method blank. The data was not qualified.
- 1,2,4-Trimethylbenzene – 0.16 ug/L. The data was flagged "J". In Lab Batch ID W51196 1,2,4-Trimethylbenzene was detected in the method blank. The data was qualified with "J+".
- Acetone – 1.4 ug/L. The data was flagged "J". In Lab Batch ID W51196 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805201-001 (EB03)

- Chloride – 0.15 mg/L. The data was flagged "J" (Analyte detected below quantitation limit). In Lab Batch ID R51131 chloride was detected in the method blank and was flagged "J". The data was qualified with "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The results were qualified "UJ-".
- Zinc (Dissolved) – 0.0065 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Iron (Total) – 0.014 mg/L. The data was flagged "J". In Lab Batch ID 38078 iron was not detected in the method blank. The data was not qualified.
- Mercury – 0.000064 mg/L. The data was flagged "J". In Lab Batch ID 38118 mercury was detected in the method blank and flagged with "J". The data was qualified "J+".
- Acetone – 3.0 ug/L vs. The data was flagged "J". In Lab Batch ID W51125 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805201-002 (FB03)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID R51131 chloride was detected in the method blank and was flagged with "J". The results were qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Zinc (Dissolved) – 0.0064 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 38118 mercury was detected in the method blank and flagged "J". The data was qualified "J+".
- Acetone – 2.2 ug/L. The data was flagged "J". In Lab Batch ID W51125 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805275 (EB04)

- Chloride – 0.22 mg/L. The data was flagged "J". In Lab Batch ID R51061 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.049 mg/L. The data was flagged "J". In Lab Batch ID R51061 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Manganese (Total) – 0.00088 mg/L. The data was flagged "J". In Lab Batch ID B51375 manganese was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0069 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000048 mg/L. The data was flagged "J". In Lab Batch ID 38215 mercury was detected in the method blank and flagged "J". The data was qualified "J+".
- Benzene – 0.71 ug/L. The data was flagged "J". In Lab Batch ID R51191 benzene was not detected in the method blank. The data was not qualified.
- Toluene – 0.84 ug/L. The data was flagged "J". In Lab Batch ID R51191 toluene was detected in the method blank and flagged "J". The data was qualified "J+".
- Xylenes, Total – 0.34 ug/L. The data was flagged "J". I n Batch ID R51191 xylenes (total) were not detected in the method blank. The data was not qualified.

Lab Report 1805275-005 (FB04)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID R51061 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.044 mg/L. The data was flagged "J". In Lab Batch ID R51061 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.18 mg/L. The data was flagged "J". In Lab Batch ID R51061 phosphorus, orthophosphate (As P) was not detected in the method blank. The data was not qualified.

- Zinc (Dissolved) – 0.0061 mg/L. The data was flagged "J". In Lab Batch ID A51375 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000047 mg/L. The data was flagged "J". In Lab Batch ID 38215 mercury was detected in the method blank and flagged "J". The data was qualified "J+".
- Toluene – 0.59 ug/L. The data was flagged "J". In Lab Batch ID R51191 toluene was detected in the method blank. The data was qualified "J+".
- Acetone – 8.1 ug/L. The data was flagged "J". In Lab Batch ID W51191 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805323-001 (EB05)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID R51062 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.026 mg/L. The data was flagged "J". In Lab Batch ID R51062 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R51062 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.37 mg/L. The data was flagged "J". In Lab Batch ID A51451 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0061 mg/L. The data was flagged "J". In Lab Batch ID A51452 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000037 mg/L. The data was flagged "J". In Lab Batch ID 38216 mercury was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 12 ug/L. The data was flagged "J". In Lab Batch ID 38002 benzoic acid was detected in the method blank. The data was qualified "J+".
- Benzene – 0.40 ug/L. The data was flagged "J". In Lab Batch ID R51191 benzene was not detected in the method blank. The data was not qualified.
- Toluene – 0.35 ug/L. The data was flagged "J". In Lab Batch ID R51191 toluene was detected in the method blank and flagged "J". The data was qualified "J+".

Lab Repot 1805323-002 (FB05)

- Nitrogen, Nitrate (as N) – 0.028 mg/L. The data was flagged "J". In Lab Batch ID R51062 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.19 mg/L. The data was flagged "J". In Lab Batch ID A51451 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0077 mg/L. The data was flagged "J". In Lab Batch ID A51452 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 11 ug/L. The data was flagged "J". In Lab Batch ID 38002 benzoic acid was detected in the method blank. The data was qualified "J+".

- Benzene – 0.25 ug/L. The data was flagged "J". In Lab Batch ID R51191 benzene was not detected in the method blank. The data was not qualified.

Lab Report 1805323-008 (FB06)

- Chloride – 0.13 mg/L. The data was flagged "J". In Lab Batch ID R51062 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.017 mg/L. The data was flagged "J". In Lab Batch ID R51062 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.10 mg/L. The data was flagged "J". In Lab Batch ID R51062 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.19 mg/L. The data was flagged "J". In Lab Batch ID A51451 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0073 mg/L. The data was flagged "J". In Lab Batch ID A51452 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000052 mg/L. The data was flagged "J". In Lab Batch ID 38216 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1805323-009 (EB06)

- Chloride – 0.25 mg/L. The data was flagged "J". In Lab Batch ID R51062 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.020 mg/L. The data was flagged "J". In Lab Batch ID R51062 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R51062 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.35 mg/L. The data was flagged "J". In Lab Batch ID A51451 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0072 mg/L. The data was flagged "J". In Lab Batch ID A51452 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000039 mg/L. The data was flagged "J". In Lab Batch ID 38216 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1805416-001 (EB07)

- Chloride – 0.11 mg/L. The data was flagged "J". In Lab Batch ID R51272 chloride was detected in the method blank and was flagged with "J". The results were qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Sodium (Dissolved) – 0.29 mg/L. The data was flagged "J". In Lab Batch ID A51175 sodium was not detected in the method blank. The data was not qualified.

- Zinc (Dissolved) – 0.0023 mg/L. The data was flagged "J". In Lab Batch ID A51175 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000038 mg/L. The data was flagged "J". In Lab Batch ID 38233 mercury was detected in the method blank. The results were qualified "J+".
- Benzoic Acid – 20 ug/L. The data was flagged "J". In Lab Batch ID 38063 benzoic acid was detected in the method blank. The data was qualified "J+".

Lab Report 1805416-002 (FB07)

- Chloride – 0.11 mg/L. The data was flagged "J". In Lab Batch ID R51272 chloride was detected in the method blank and was flagged with "J". The results were qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Chromium (Dissolved) – 0.0017 mg/L. The data was flagged "J". In Lab Batch ID A51175 chromium was not detected in the method blank. The data was not qualified.
- Mercury – 0.000037 mg/L. The data was flagged "J". In Lab Batch ID 38233 mercury was detected in the method blank. The results were qualified "J+".
- Benzoic Acid – 16 ug/L. The data was flagged "J". In Lab Batch ID 38063 benzoic acid was detected in the method blank. The data was qualified "J+".

Lab Report 1805523-010 (FB08)

- Acetone – 0.94 ug/L. The data was flagged "J". In Lab Batch ID A51325 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805651-002 (EB09)

- Chloride – 0.14 mg/L. The data was flagged "J". In Lab Batch ID R51286 chloride was detected in the method blank and was flagged with "J". The results were qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Zinc (Dissolved) – 0.0094 mg/L. The data was flagged "J". In Lab Batch ID B51646 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The results were qualified "J+".
- Benzoic Acid – 14 ug/L. The data was flagged "J". In Lab Batch ID 38139 benzoic acid was not detected in the method blank. The data was not qualified.
- 1-Methylnaphthalene – 0.74 ug/L. The data was flagged "J". In Lab Batch ID R51293 1-methylnaphthalene was detected in the method blank. The data was qualified "J+".
- 2-Methylnaphthalene – 0.50 ug/L. The data was flagged "J". In Lab Batch ID R51293 2-methylnaphthalene was detected in the method blank. The data was qualified "J+".

Lab Report 1805651-003 (FB09)

- Chloride – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R51286 chloride was detected in the method blank and was flagged with "J". The results were qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Zinc (Dissolved) – 0.0092 mg/L. The data was flagged "J". In Lab Batch ID C51646 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The results were qualified "J+".
- Benzoic Acid – 11 ug/L. The data was flagged "J". In Lab Batch ID 38139 benzoic acid was not detected in the method blank. The data was not qualified.

Lab Report 1805682-001 (FB10)

- Chloride – 0.31 mg/L. The data was flagged "J". In Lab Batch ID R51220 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.020 mg/L. The data was flagged "J". In Lab Batch ID R51220 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.34 mg/L. The data was flagged "J". In Lab Batch ID C51516 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0070 mg/L. The data was flagged "J". In Lab Batch ID C51646 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000060 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 17 ug/L. The data was flagged "J". In Lab Batch ID 38139 benzoic acid was not detected in the method blank. The data was not qualified.

Lab Report 1805682-005 (EB10)

- Chloride – 0.31 mg/L. The data was flagged "J". In Lab Batch ID R51220 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.026 mg/L. The data was flagged "J". In Lab Batch ID R51220 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Sulfate – 0.43 mg/L. The data was flagged "J". In Lab Batch ID R51220 sulfate was not detected in the method blank. The data was not qualified.
- Manganese (Dissolved) – 0.00059 mg/L. The data was flagged "J". In Lab Batch ID C51646 manganese was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.44 mg/L. The data was flagged "J". In Lab Batch ID C51516 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0083 mg/L. The data was flagged "J". In Lab Batch ID C51646 zinc was not detected in the method blank. The data was not qualified.

- Iron (Total) – 0.012 mg/L. The data was flagged "J". In Lab Batch ID 38326 iron was not detected in the method blank. The data was not qualified.
- Mercury – 0.000060 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 13 ug/L. The data was flagged "J". In Lab Batch ID 38139 benzoic acid was not detected in the method blank. The data was not qualified.
- Benzene – 0.33 ug/L. The data was flagged "J". In Lab Batch ID R51363 benzene was detected in the method blank. The data was qualified "J+".

Lab Report 1805682-009 (FB11)

- Chloride – 0.11 mg/L. The data was flagged "J". In Lab Batch ID R51220 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.020 mg/L. The data was flagged "J". In Lab Batch ID R51220 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0067 mg/L vs screening level of 10 mg/L. The data was flagged "J". In Lab Batch ID C51516 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The data was qualified "J+".
- Toluene – 0.082 ug/L. The data was flagged "J". In Lab Batch ID R51363 toluene was not detected in the method blank. The data was not qualified.

Lab Report 1805682-010 (EB11)

- Nitrogen, Nitrate (as N) – 0.024 mg/L. The data was flagged "J". In Lab Batch ID R51220 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Manganese (Dissolved) – 0.00041 mg/L. The data was flagged "J". In Lab Batch ID C51516 manganese was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.25 mg/L. The data was flagged "J". In Lab Batch ID C51516 sodium was detected in the method blank. The data was qualified "J+".
- Zinc (Dissolved) – 0.0088 mg/L. The data was flagged "J". In Lab Batch ID C51516 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000058 mg/L. The data was flagged "J". In Lab Batch ID 38431 mercury was detected in the method blank. The data was qualified "J+".

Lab Report 1805872-001 (FB12)

- Chloride – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R51319 chloride was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".

- Zinc (Dissolved) – 0.0084 mg/L. The data was flagged "J". In Lab Batch ID A51699 zinc was not detected in the method blank. The data was not qualified.
- Toluene – 0.098 ug/L. The data was flagged "J". In Lab Batch ID W51418 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 3.7 ug/L. The data was flagged "J". In Lab Batch ID W51418 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805972-001 (FB13)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID R51607 chloride was detected in the method blank. The data was qualified "J+".
- Phosphorus, Orthophosphate (As P) – <0.50 mg/L. The data was flagged "H". The data was qualified "UJ-".
- Iron (Dissolved) - 0.012 mg/L. In Lab Batch ID A51646 iron was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0068 mg/L. The data was flagged "J". In Lab Batch ID A51646 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000085 mg/L. The data was flagged "J". In Lab Batch ID 38266 mercury was detected in the method blank. The data was qualified "J+".
- Toluene – 0.010 ug/L. The data was flagged "J". In Lab Batch ID W51418 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 6.5 ug/L. The data was flagged "J". In Lab Batch ID W51418 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1805A27-002 (FB14)

- Zinc (Dissolved) – 0.0086 mg/L. In Lab Batch ID A51699 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000047 mg/L. The data was flagged "J". In Lab Batch ID 38118 mercury was detected in the method blank and flagged with "J". The results were qualified "J+".
- Acetone – 6.3 ug/L. The data was flagged "J". In Lab Batch ID W51416 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808B32-001 (FB01)

- Chloride – 0.28 mg/L. The data was flagged "J". In Lab Batch ID A53556 chloride was detected in the method blank. The data was qualified "J+".
- Nitrogen, Nitrate (as N) – 0.044 mg/L. The data was flagged "J". In Lab Batch ID A53556 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.26 mg/L. The data was flagged "J". In Lab Batch ID A53556 phosphorus was not detected in the method blank. The data was not qualified.
- Copper (Dissolved) - 0.0037 mg/L. The data was flagged "J". In Lab Batch ID C53924 copper was not detected in the method blank. The data was not qualified.

- Manganese (Dissolved) – 0.00066 mg/L. The data was flagged "J". In Lab Batch ID C53924 manganese was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0083 mg/L. The data was flagged "J". In Lab Batch ID C53924 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000071 mg/L. The data was flagged "J". In Lab Batch ID 40198 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.8 ug/L. The data was flagged "J". In Lab Batch ID 39925 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.43 ug/L. The data was flagged "J". In Lab Batch ID W53574 toluene was not detected in the method blank. The data was not qualified.
- GRO - 0.036 mg/L. The data was flagged "J". In Lab Batch ID G53574 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808B32-002 (EB01)

- Chloride – 0.15 mg/L. The data was flagged "J". In Lab Batch ID A53554 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.066 mg/L. The data was flagged "J". In Lab Batch ID A53554 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Copper (Dissolved) - 0.0039 mg/L. The data was flagged "J". In Lab Batch ID C53924 copper was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.27 mg/L. The data was flagged "J". In Lab Batch ID C53924 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0089 mg/L. The data was flagged "J". In Lab Batch ID C53924 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000073 mg/L. The data was flagged "J". In Lab Batch ID 40198 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.7 ug/L. The data was flagged "J". In Lab Batch ID 39925 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.40 ug/L. The data was flagged "J". In Lab Batch ID W53574 toluene was not detected in the method blank. The data was not qualified.
- GRO - 0.018 mg/L. The data was flagged "J". In Lab Batch ID G53574 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808D32-001 (FB02)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID A53658 chloride was detected in the method blank. The data was qualified "J+".
- Phosphorus, Orthophosphate (As P) – 0.27 mg/L. The data was flagged "JH". In Lab Batch ID A53658 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J-" due to analysis outside of holding time.

- Sodium (Dissolved) – 0.25 mg/L. The data was flagged "J". In Lab Batch ID C54078 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0087 mg/L. The data was flagged "J". In Lab Batch ID C54078 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 8.4 ug/L. The data was flagged "J". In Lab Batch ID 39989 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.25 ug/L. The data was flagged "J". In Lab Batch ID W53662 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 6.1 ug/L. The data was flagged "J". In Lab Batch ID R53711 acetone was not detected in the method blank. The data was not qualified.
- GRO - 0.023 mg/L. The data was flagged "J". In Lab Batch ID G53662 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808D32-002 (EB02)

- Chloride – 0.20 mg/L. The data was flagged "J". In Lab Batch ID A53658 chloride was detected in the method blank. The data was qualified "J+".
- Phosphorus, Orthophosphate (As P) – 0.26 mg/L. The data was flagged "JH". In Lab Batch ID A53658 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J-" due to analysis outside of holding time.
- Calcium (Dissolved) – 0.15 mg/L. The data was flagged "J". In Lab Batch ID C54078 calcium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.21 mg/L. The data was flagged "J". In Lab Batch ID C54078 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.015 mg/L. In Lab Batch ID C54078 zinc was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0036 mg/L. The data was flagged "J". In Lab Batch ID 39959 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.6 ug/L. The data was flagged "J". In Lab Batch ID 39989 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.27 ug/L. The data was flagged "J". In Lab Batch ID W53662 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 8.5 ug/L. The data was flagged "J". In Lab Batch ID R53711 acetone was not detected in the method blank. The data was not qualified.
- GRO - 0.033 mg/L. The data was flagged "J". In Lab Batch ID G53662 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808E67-001 (FB03)

- Chloride – 0.23 mg/L. The data was flagged "J". In Lab Batch ID R53678 chloride was not detected in the method blank. The data was not qualified.

- Nitrogen, Nitrate (as N) – 0.58 mg/L. In Lab Batch ID R53678 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.26 mg/L. The data was flagged "J". In Lab Batch ID R53678 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J+".
- Sulfate – 1.1 mg/L. In Lab Batch ID R53678 sulfate was detected in the method blank. The data was not qualified. The data was qualified "J+".
- Zinc (Dissolved) – 0.0077 mg/L. The data was flagged "J". In Lab Batch ID C54078 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.6 ug/L. The data was flagged "J". In Lab Batch ID 39989 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.48 ug/L. The data was flagged "J". In Lab Batch ID W53662 toluene was not detected in the method blank. The data was not qualified.
- GRO - 0.021 mg/L. The data was flagged "J". In Lab Batch ID G53662 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808E67-002 (EB03)

- Chloride – 0.23 mg/L. The data was flagged "J". In Lab Batch ID R53678 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.050 mg/L. In Lab Batch ID R53678 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.26 mg/L. The data was flagged "J". In Lab Batch ID R53678 phosphorus, orthophosphate (As P) was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.72 mg/L. In Lab Batch ID C54078 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.018 mg/L. In Lab Batch ID C54078 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000046 mg/L. The data was flagged "J". In Lab Batch ID 40221 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.7 ug/L. The data was flagged "J". In Lab Batch ID 39989 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.39 ug/L. The data was flagged "J". In Lab Batch ID W53662 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 4.8 ug/L. The data was flagged "J". In Lab Batch ID R53711 acetone was not detected in the method blank. The data was not qualified.
- GRO - 0.021 mg/L. The data was flagged "J". In Lab Batch ID G53662 GRO was detected in the method blank. The data was qualified "J+".

Lab Report 1808F16-001 (FB04)

- Chloride – 0.14 mg/L. The data was flagged "J". In Lab Batch ID R53713 chloride was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.014 mg/L. In Lab Batch ID E54078 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.9 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.26 ug/L. The data was flagged "J". In Lab Batch ID R53736 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 13 ug/L. The data was flagged "E" (value above quantitation range). In Lab Batch ID R53736 acetone was in the method blank. The data was qualified "J+".

Lab Report 1808F16-002 (EB04)

- Chloride – 0.20 mg/L. The data was flagged "J". In Lab Batch ID R53713 chloride was detected in the method blank. The data was qualified "J+".
- Calcium (Dissolved) – 0.12 mg/L. The data was flagged "J". In Lab Batch ID E54078 calcium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.022 mg/L. In Lab Batch ID E54078 zinc was not detected in the method blank. The data was not qualified.
- Copper (Total) – 0.0046 mg/L. The data was flagged "J". In Lab Batch ID 40189 copper was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.4 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.23 ug/L. The data was flagged "J". In Lab Batch ID R53736 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 13 ug/L. The data was flagged "E" (value above quantitation range). In Lab Batch ID R53736 acetone was in the method blank. The data was qualified "J+".

Lab Report 1808F55-002 (FB05)

- Zinc (Dissolved) – 0.011 mg/L. In Lab Batch ID B54126 zinc was not detected in the method blank. The data was not qualified.
- Copper (Total) – 0.0051 mg/L. The data was flagged "J". In Lab Batch ID 40243 copper was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.037 mg/L. The data was flagged "J". In Lab Batch ID 40243 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000065 mg/L. The data was flagged "J". In Lab Batch ID 40340 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 7.8 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".

- Benzene – 0.31 ug/L. The data was flagged "J". In Lab Batch ID R53749 benzene was not detected in the method blank. The data was not qualified.
- Toluene – 0.21 ug/L. The data was flagged "J". In Lab Batch ID R53749 toluene was not detected in the method blank. The data was not qualified.
- Naphthalene – 0.58 ug/L. The data was flagged "J". In Lab Batch ID R53749 naphthalene was not detected in the method blank. The data was not qualified.
- 2-Methylnaphthalene – 0.33 ug/L. The data was flagged "J". In Lab Batch ID R53749 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 6.2 ug/L. The data was flagged "J". In Lab Batch ID R53749 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808F55-003 (EB05)

- Chloride – 0.25 mg/L. The data was flagged "J". In Lab Batch ID R53713 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.037 mg/L. In Lab Batch ID R53713 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.011 mg/L. In Lab Batch ID B54126 zinc was not detected in the method blank. The data was not qualified.
- Copper (Total) – 0.0046 mg/L. The data was flagged "J". In Lab Batch ID 40243 copper was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0080 mg/L. The data was flagged "J". In Lab Batch ID 40243 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000075 mg/L. The data was flagged "J". In Lab Batch ID 40340 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.5 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".
- Toluene – 0.18 ug/L. The data was flagged "J". In Lab Batch ID R53749 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 7.4 ug/L. The data was flagged "J". In Lab Batch ID R53749 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808F55-009 (FB06)

- Zinc (Dissolved) – 0.0069 mg/L. The data was flagged "J". In Lab Batch ID B54126 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 40340 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.7 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".

- Naphthalene – 0.42 ug/L. The data was flagged "J". In Lab Batch ID R53749 naphthalene was not detected in the method blank. The data was not qualified.
- 2-Methylnaphthalene – 0.46 ug/L. The data was flagged "J". In Lab Batch ID R53749 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 7.4 ug/L. The data was flagged "J". In Lab Batch ID R53749 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808F55-010 (EB06)

- Chloride – 0.13 mg/L. The data was flagged "J". In Lab Batch ID A53713 chloride was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.23 mg/L. The data was flagged "J". In Lab Batch ID B54126 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0086 mg/L. In Lab Batch ID B54126 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000059 mg/L. The data was flagged "J". In Lab Batch ID 40340 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.4 ug/L. The data was flagged "J". In Lab Batch ID 40042 benzoic acid was detected in the method blank. The data was qualified "J+".
- Acetone – 4.2 ug/L. The data was flagged "J". In Lab Batch ID R53749 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808H79-007 (FB07)

- Benzene – 0.60 ug/L. The data was flagged "J". In Lab Batch ID R53912 benzene was not detected in the method blank. The data was not qualified.
- Acetone – 5.0 ug/L. The data was flagged "J". In Lab Batch ID R53912 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1808H79-008 (EB07)

- Benzene – 0.21 ug/L. The data was flagged "J". In Lab Batch ID R53912 benzene was not detected in the method blank. The data was not qualified.

Lab Report 1808I45-001 (FB08)

- Chloride – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R53882 chloride was not detected in the method blank. The data was not qualified.
- Mercury – 0.000076 mg/L. The data was flagged "J". In Lab Batch ID 40390 mercury was detected in the method blank. The data was qualified "J+".
- Mercury – 0.000071 mg/L. The data was flagged "J". In Lab Batch ID 40390 mercury was detected in the method blank. The data was qualified "J+".

- Benzoic Acid – 100 ug/L. The data was flagged "JD". In Lab Batch ID 40131 benzoic acid was detected in the method blank. The data was qualified "J+".

Lab Report 1808I45-002 (EB08)

- Chloride – 0.21 mg/L. The data was flagged "J". In Lab Batch ID R53882 chloride was not detected in the method blank. The data was not qualified.
- Copper (Total) – 0.0047 mg/L. The data was flagged "J". In Lab Batch ID 40257 copper was detected in the method blank. The data was qualified "J+".
- Zinc (Total) – 0.0034 mg/L. The data was flagged "J". In Lab Batch ID 40257 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000063 mg/L. The data was flagged "J". In Lab Batch ID 40390 mercury was detected in the method blank. The data was qualified "J+".
- Calcium (Dissolved) – 0.082 mg/L. The data was flagged "J". In Lab Batch ID A54217 calcium was not detected in the method blank. The data was not qualified.
- Copper (Dissolved) – 0.0040 mg/L. The data was flagged "J". In Lab Batch ID A54217 copper was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.013 mg/L. In Lab Batch ID A54217 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000068 mg/L. The data was flagged "J". In Lab Batch ID 40390 mercury was detected in the method blank. The data was qualified "J+".
- Benzoic Acid – 6.4 ug/L. The data was flagged "J". In Lab Batch ID 40131 benzoic acid was detected in the method blank. The data was qualified "J+".

Lab Report 1808J13-001 (FB09)

- Acetone – 11 ug/L. In Lab Batch ID W54008 acetone was detected in the method blank. The data was qualified "J+".
- Gasoline Range Organics – 0.013 mg/L. The data was flagged "J". In Lab Batch ID G54043 GRO was detected in the method blank. The data was qualified "J+".
- Diesel Range Organics – 0.71 mg/L. The data was flagged "J". In Lab Batch ID 40147 DRO was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.6 ug/L. The data was flagged "J". In Lab Batch ID 40141 benzoic acid was detected in the method blank. The data was qualified "J+".
- Chromium (Dissolved) – 0.0015 mg/L. The data was flagged "J". In Lab Batch ID A54392 chromium was not detected in the method blank. The data was not qualified.
- Potassium (Dissolved) – 0.24 mg/L. The data was flagged "J". In Lab Batch ID A54392 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.52 mg/L. The data was flagged "J". In Lab Batch ID A54392 sodium was not detected in the method blank. The data was not qualified.

- Zinc (Dissolved) – 0.0068 mg/L. The data was flagged "J". In Lab Batch ID A54392 zinc was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0037 mg/L. The data was flagged "J". In Lab Batch ID 40309 zinc was detected in the method blank. The data was qualified "J+".

Lab Report 1808J13-002 (EB09)

- Acetone – 4.6 ug/L. The data was flagged "J". In Lab Batch ID W54008 acetone was detected in the method blank. The data was qualified "J+".
- Diesel Range Organics – 0.74 mg/L. The data was flagged "J". In Lab Batch ID 40147 DRO was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.4 ug/L. The data was flagged "J". In Lab Batch ID 40141 benzoic acid was detected in the method blank. The data was qualified "J+".
- Chloride – 0.19 mg/L. The data was flagged "J". In Lab Batch ID R53878 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.023 mg/L. The data was flagged "J". In Lab Batch ID R53878 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Calcium (Dissolved) – 0.086 mg/L. The data was flagged "J". In Lab Batch ID A54392 calcium was not detected in the method blank. The data was not qualified.
- Potassium (Dissolved) – 0.19 mg/L. The data was flagged "J". In Lab Batch ID A54392 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.75 mg/L. The data was flagged "J". In Lab Batch ID A54392 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0059 mg/L. The data was flagged "J". In Lab Batch ID A54392 zinc was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0035 mg/L. The data was flagged "J". In Lab Batch ID 40309 zinc was detected in the method blank. The data was qualified "J+".
- Mercury – 0.000039 mg/L. The data was flagged "J". In Lab Batch ID 40446 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1808J13-010 (FB10)

- Acetone – 20 ug/L. In Lab Batch ID W54032 acetone was not detected in the method blank. The data was not qualified.
- 2-Butanone – 1.5 ug/L. The data was flagged "J". In Lab Batch ID W54032 2-butone was not detected in the method blank. The data was not qualified.
- Methylene Chloride – 0.37 ug/L. The data was flagged "J". In Lab Batch ID W54032 methylene chloride was not detected in the method blank. The data was not qualified.
- Gasoline Range Organics – 0.021 mg/L. The data was flagged "J". In Lab Batch ID G54032 GRO was detected in the method blank. The data was qualified "J+".

- Benzoic Acid – 6.6 ug/L. The data was flagged "J". In Lab Batch ID 40141 benzoic acid was detected in the method blank. The data was qualified "J+".
- Potassium (Dissolved) – 0.36 mg/L. The data was flagged "J". In Lab Batch ID A54392 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.55 mg/L. The data was flagged "J". In Lab Batch ID A54392 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0055 mg/L. The data was flagged "J". In Lab Batch ID A54392 zinc was not detected in the method blank. The data was not qualified.

Lab Report 1808J13-011 (EB10)

- Acetone – 1.8 ug/L. The data was flagged "J". In Lab Batch ID W54032 acetone was not detected in the method blank. The data was not qualified.
- Diesel Range Organics – 0.93 mg/L. The data was flagged "J". In Lab Batch ID 40147 DRO was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 9.8 ug/L. The data was flagged "J". In Lab Batch ID 40141 benzoic acid was detected in the method blank. The data was qualified "J+".
- Nitrogen, Nitrate (as N) – 0.053 mg/L. The data was flagged "J". In Lab Batch ID R53878 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Sulfate – 0.90 mg/L. In Lab Batch ID R53878 sodium was not detected in the method blank. The data was not qualified.
- Potassium (Dissolved) – 0.25 mg/L. The data was flagged "J". In Lab Batch ID A54392 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.89 mg/L. The data was flagged "J". In Lab Batch ID A54392 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.010 mg/L. In Lab Batch ID A54392 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000043 mg/L. The data was flagged "J". In Lab Batch ID 40446 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1809227-001 (FB11)

- Acetone – 2.3 ug/L. The data was flagged "J". In Lab Batch ID W54111 acetone was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.8 ug/L. The data was flagged "J". In Lab Batch ID 40263 benzoic acid was detected in the method blank. The data was qualified "J+".
- Nitrogen, Nitrate (as N) – 0.023 mg/L. The data was flagged "J". In Lab Batch ID R53995 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Potassium (Dissolved) – 0.19 mg/L. The data was flagged "J". In Lab Batch ID B54392 potassium was not detected in the method blank. The data was not qualified.

- Zinc (Dissolved) – 0.0052 mg/L. The data was flagged "J". In Lab Batch ID B54392 zinc was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0035 mg/L. The data was flagged "J". In Lab Batch ID 40258 zinc was not detected in the method blank. The data was not qualified.

Lab Report 1809227-002 (EB11)

- Acetone – 1.7 ug/L. The data was flagged "J". In Lab Batch ID W54111 acetone was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 7.9 ug/L. The data was flagged "J". In Lab Batch ID 40263 benzoic acid was detected in the method blank. The data was qualified "J+".
- Chloride – 0.20 mg/L. The data was flagged "J". In Lab Batch ID R53995 chloride was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.016 mg/L. The data was flagged "J". In Lab Batch ID R53995 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0057 mg/L. The data was flagged "J". In Lab Batch ID B54392 zinc was not detected in the method blank. The data was not qualified.
- Zinc (Total) – 0.0074 mg/L. The data was flagged "J". In Lab Batch ID 40258 zinc was not detected in the method blank. The data was not qualified.

Lab Report 1809409-001 (FB12)

- Acetone – 2.5 ug/L. The data was flagged "J". In Lab Batch ID B54139 acetone was not detected in the method blank. The data was not qualified.
- Chloride – 0.12 mg/L. The data was flagged "J". In Lab Batch ID R54060 chloride was not detected in the method blank. The data was not qualified.
- Mercury – 0.000046 mg/L. The data was flagged "J". In Lab Batch ID 40731 mercury was detected in the method blank. The data was qualified "J+".
- Potassium (Dissolved) – 0.13 mg/L. The data was flagged "J". In Lab Batch ID B54598 potassium was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.52 mg/L. The data was flagged "J". In Lab Batch ID A54626 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0083 mg/L. The data was flagged "J". In Lab Batch ID B54598 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000095 mg/L. The data was flagged "J". In Lab Batch ID 40617 mercury was detected in the method blank. The data was qualified "J+".

Lab Report 1809409-002 (EB12)

- Acetone – 6.7 ug/L. The data was flagged "J". In Lab Batch ID B54139 acetone was not detected in the method blank. The data was not qualified.
- Chloride – 0.19 mg/L. The data was flagged "J". In Lab Batch ID R54060 chloride was not detected in the method blank. The data was not qualified.

- Copper (Total) – 0.0085 mg/L. The data was flagged "J". In Lab Batch ID 40361 copper was not detected in the method blank. The data was not qualified.
- Mercury – 0.000060 mg/L. The data was flagged "J". In Lab Batch ID 40617 mercury was detected in the method blank. The data was qualified "J+".
- Sodium (Dissolved) – 0.72 mg/L. The data was flagged "J". In Lab Batch ID A54626 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0071 mg/L. The data was flagged "J". In Lab Batch ID B54598 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000056 mg/L. The data was flagged "J". In Lab Batch ID 40617 mercury was detected in the method blank. The data was qualified "J+".

Lab Report 1809583-001 (FB13)

- Acetone – 13 ug/L. The data was flagged "J". In Lab Batch ID A54139 acetone was not detected in the method blank. The data was not qualified.
- Nitrogen, Nitrate (as N) – 0.22 mg/L. In Lab Batch ID R54117 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.17 mg/L. The data was flagged "J". In Lab Batch ID R54117 phosphorus was detected in the method blank. The data was qualified "J+".
- Sulfate – 0.65 mg/L. In Lab Batch ID R54117 sulfate was not detected in the method blank. The data was not qualified.
- Potassium (Dissolved) – 0.86 mg/L. The data was flagged "J". In Lab Batch ID B54598 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 5.6 mg/L. In Lab Batch ID A54598 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0072 mg/L. The data was flagged "J". In Lab Batch ID B54598 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000050 mg/L. The data was flagged "J". In Lab Batch ID 40577 mercury was detected in the method blank. The data was qualified "J+".

Lab Report 1809712-002 (FB14)

- Acetone – 4.5 ug/L. The data was flagged "J". In Lab Batch ID R54185 acetone was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.39 mg/L. In Lab Batch ID B54547 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0065 mg/L. The data was flagged "J". In Lab Batch ID B54547 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.00015 mg/L. The data was flagged "J". In Lab Batch ID 40576 mercury was detected in the method blank. The data was qualified "J+".

- Copper (Total) – 0.0047 mg/L. The data was flagged "J". In Lab Batch ID 40396 copper was not detected in the method blank. The data was not qualified.
- Mercury – 0.00014 mg/L. The data was flagged "J". In Lab Batch ID 40576 mercury was detected in the method blank. The data was qualified "J+".

Lab Report 1809856-002 (FB-15)

- Acetone – 4.8 ug/L. The data was flagged "J". In Lab Batch ID R54215 acetone was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.11 mg/L. The data was flagged "JH". In Lab Batch ID R54146 phosphorus was detected in the method blank. The data was qualified "J-" due to the analysis outside of the holding time.
- Potassium (Dissolved) – 0.16 mg/L. The data was flagged "J". In Lab Batch ID B54598 potassium was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.59 mg/L. The data was flagged "J". In Lab Batch ID A54598 sodium was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.011 mg/L. In Lab Batch ID A54598 zinc was not detected in the method blank. The data was not qualified.

Lab Report 18098884-001 (FB 16)

- Nitrogen, Nitrate (as N) – 0.017 mg/L. The data was flagged "J". In Lab Batch ID R54184 nitrogen, nitrate (as N) was not detected in the method blank. The data was not qualified.
- Manganese (Dissolved) – 0.00045 mg/L. The data was flagged "J". In Lab Batch ID B54723 manganese was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0082 mg/L. The data was flagged "J". In Lab Batch ID B54723 zinc was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 6.8 ug/L. The data was flagged "J". In Lab Batch ID 40466 benzoic acid was detected in the method blank. The data was qualified "J+".

Lab Report 1809A73-001 (FB17)

- Toluene – 0.43 ug/L. The data was flagged "J". In Lab Batch ID A54375 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 3.1 ug/L. The data was flagged "J". In Lab Batch ID A54375 acetone was not detected in the method blank. The data was not qualified.
- Benzoic Acid – 6.8 ug/L. The data was flagged "J". In Lab Batch ID 40466 benzoic acid was detected in the method blank. The data was qualified "J+".
- Manganese (Dissolved) – 0.00083 mg/L. The data was flagged "J". In Lab Batch ID A54767 manganese was not detected in the method blank. The data was not qualified.
- Sodium (Dissolved) – 0.47 mg/L. The data was flagged "J". In Lab Batch ID A54767 sodium was not detected in the method blank. The data was not qualified.

- Zinc (Dissolved) – 0.0073 mg/L. The data was flagged "J". In Lab Batch ID A54767 zinc was not detected in the method blank. The data was not qualified.

Lab Report 1809A73-001 (FB18)

- Toluene – 0.46 ug/L. The data was flagged "J". In Lab Batch ID A54375 toluene was not detected in the method blank. The data was not qualified.
- Acetone – 3.9 ug/L. The data was flagged "J". In Lab Batch ID A54375 acetone was not detected in the method blank. The data was not qualified.
- Phosphorus, Orthophosphate (As P) – 0.17 mg/L. The data was flagged "JH". In Lab Batch ID R54332 phosphorus was detected in the method blank. The data was qualified "J-" due to the analysis outside of the holding time.
- Zinc (Dissolved) – 0.0099 mg/L. The data was flagged "J". In Lab Batch ID B54767 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000055 mg/L. The data was flagged "J". In Lab Batch ID 40868 mercury was not detected in the method blank. The data was not qualified.
- Mercury – 0.000048 mg/L. The data was flagged "J". In Lab Batch ID 40868 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1809C83-001 (FB19)

- Toluene – 0.71 ug/L. The data was flagged "J". In Lab Batch ID R54481 toluene was not detected in the method blank. The data was not qualified.
- MTBE – 0.58 ug/L. The data was flagged "J". In Lab Batch ID R54481 MTBE was not detected in the method blank. The data was not qualified.
- Acetone – 4.7 ug/L. The data was flagged "J". In Lab Batch ID R54481 acetone was not detected in the method blank. The data was not qualified.
- Zinc (Dissolved) – 0.0074 mg/L. The data was flagged "J". In Lab Batch ID C54767 zinc was not detected in the method blank. The data was not qualified.
- Mercury – 0.000042 mg/L. The data was flagged "J". In Lab Batch ID 40932 mercury was not detected in the method blank. The data was not qualified.

Lab Report 1811A37-001 (Field Blank)

- Toluene – 0.18 ug/L. The data was flagged "J". In Lab Batch ID R55900 toluene was not detected in the method blank. The data was not qualified.

Lab Report 1811D80-001 (Field Blank)

- Toluene – 0.23 ug/L. The data was flagged "J". In Lab Batch ID R56045 toluene was not detected in the method blank. The data was not qualified.

Lab Report 1811E76-001 (Field Blank)

- Toluene – 0.28 ug/L. The data was flagged "J". In Lab Batch ID R56074 toluene was not detected in the method blank. The data was not qualified.

Lab Report 1811442-001 (Field Blank)

- Toluene – 0.21 ug/L. The data was flagged "J". In Lab Batch ID R55556 toluene was not detected in the method blank. The data was not qualified.
- Naphthalene – 1.0 ug/L. The data was flagged "J". In Lab Batch ID R55556 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 2.1 ug/L. The data was flagged "J". In Lab Batch ID R55556 acetone was detected in the method blank. The data was qualified "J+".

Lab Report 1811496-002 (Field Blank)

- Toluene – 0.20 ug/L. The data was flagged "J". In Lab Batch ID R55623 toluene was not detected in the method blank. The data was not qualified.
- Naphthalene – 0.55 ug/L. The data was flagged "J". In Lab Batch ID R55623 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 1.9 ug/L. The data was flagged "J". In Lab Batch ID R55623 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1811496-006 (Field Blank)

- Toluene – 0.20 ug/L. The data was flagged "J". In Lab Batch ID R55623 toluene was not detected in the method blank. The data was not qualified.
- Naphthalene – 0.55 ug/L. The data was flagged "J". In Lab Batch ID R55623 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 2.5 ug/L. The data was flagged "J". In Lab Batch ID R55623 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1811695-002 (Field Blank)

- Toluene – 0.18 ug/L. The data was flagged "J". In Lab Batch ID R55666 toluene was not detected in the method blank. The data was not qualified.
- Naphthalene – 0.57 ug/L. The data was flagged "J". In Lab Batch ID R55666 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 2.7 ug/L. The data was flagged "J". In Lab Batch ID R55666 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1811695-002 (Field Blank)

- Naphthalene – 0.31 ug/L. The data was flagged "J". In Lab Batch ID R55795 naphthalene was not detected in the method blank. The data was not qualified.
- Acetone – 3.6 ug/L. The data was flagged "J". In Lab Batch ID R55795 acetone was not detected in the method blank. The data was not qualified.

Lab Report 1812130-001 (Field Blank)

- Toluene – 0.30 ug/L. The data was flagged "J". In Lab Batch ID R56157 toluene was not detected in the method blank. The data was not qualified.

Data qualification for field blanks and equipment rinsate blanks is shown on Table H-2.

2.4.4 Common Laboratory Contaminants

Per USEPA guidelines, common laboratory contaminants for VOC analysis are acetone, 2-butanone (MEK), cyclohexane, chloromethane, and methylene chloride. Data qualification for contaminants in method blanks is shown on Table H-2.

2.4.5 Methanol Blanks

Methanol Blanks are not applicable and were not analyzed.

2.5 SURROGATE RECOVERY

Surrogate recoveries for the organic and inorganic analyses were performed at the required frequency and were within laboratory acceptance limits, with the following exceptions:

Lab Report 1805028-004

- Surrogate recovery for 2-Fluorophenol was above the upper acceptance limit for field sample OW-64 in Lab Batch ID G51049. The associated detected field sample result for gasoline range organics (GRO) is qualified "J+" due to a potential high bias.

Lab Report 1805028-004

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample OW-64 in Lab Batch ID 37947. The associated detected field sample results for 2-methlyphenol and naphthalene are qualified "J-" due to a potential low bias.

Lab Report 1805106-001

- Surrogate recovery for DNOP was above the upper acceptance limit for field sample EB02 in Lab Batch ID 37932. No diesel range organics (DRO) or motor oil organics (MRO) were reported above the detection limit. The associated detected field sample results for GRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1805106-005

- Surrogate recovery for DNOP was above the upper acceptance limit for field sample NAPIS-2 in Lab Batch ID G51049. The associated detected field sample result for GRO is qualified "J+" due to a potential high bias.

Lab Report 1805106-006

- Surrogate recovery for DNOP was above the upper acceptance limit for field sample KA-3 in Lab Batch ID G51049. The associated detected field sample result for GRO is qualified "J+" due to a potential high bias.

Lab Report 1805106-008

- Surrogate recovery for DNOP was above the upper acceptance limit for field sample OAPIS-1 in Lab Batch ID G51049. The associated detected field sample result for GRO is qualified "J+" due to a potential high bias.

Lab Report 1805106-010

- Surrogate recovery for DNOP was above the upper acceptance limit for field sample DUP02 in Lab Batch ID G51049. The associated detected field sample result for GRO is qualified "J+" due to a potential high bias.

Lab Report 1805201-008

- Surrogate recovery for 2-Fluorophenol, Phenol-d5, and 2,4,6-Tribromophenol were above the upper acceptance limit for field sample MKTF-27 in Lab Batch ID 37947. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1805201-009

- Surrogate recovery for 4-Terphenyl-d14 was above the upper acceptance limit for field sample DUP03 in Lab Batch ID 37947. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1805275-001

- Surrogate recovery for 4-Terphenyl-d14 was above the upper acceptance limit for field sample MKTF-15 in Lab Batch ID 38002. The associated detected field sample results for benzoic acid, 2,4-dimethylphenol, 2-methlyphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J+" due to a potential high bias.

Lab Report 1805275-001

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-11 in Lab Batch ID 38002. The associated detected field sample results for aniline, 2,4-dimethylphenol, 2-methlyphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805275-006

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-10 in Lab Batch ID 38002. The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, 2-methlyphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805275-008

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample DUP04 in Lab Batch ID 38002. The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, 2-methlyphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805523-002

- Surrogate recovery for 2-Fluorophenol, and 2,4,6-Tribromophenol were below the lower acceptance limit for field sample OW-59 in Lab Batch ID 38063. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1805275-001

- Surrogate recovery for 4-Terphenyl-d14 was below the lower acceptance limit for field sample OW-55 in Lab Batch ID 38063. The associated detected field sample results for 1-methylnaphthalene, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805523-005

- Surrogate recovery for 4-Terphenyl-d14 was above the upper acceptance limit for field sample MKTF-54 in Lab Batch ID 38063. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1805523-006

- Surrogate recovery for Nitrobenzene-d5 was below the lower acceptance limit for field sample OW-57 in Lab Batch ID 38063. The associated detected field sample results for benzoic acid was flagged "J". The associated detected field sample results for 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805523-011

- Surrogate recovery for 4-Terphenyl-d14 was above the upper acceptance limit for field sample OW-58 in Lab Batch ID 38063. The associated detected field sample results for 3+4-methylphenol was flagged "J". The associated detected field sample results for benzoic acid, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenol are qualified "J+" due to a potential high bias.

Lab Report 1805651-006

- Surrogate recovery for 2-Fluorophenol, Phenol-d5, and 2,4,6-Tribromophenol were below the lower acceptance limit for field sample MKTF-43 in Lab Batch ID 38139. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1805682-006

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-13 in Lab Batch ID 38139. The associated detected field sample results for 3+4-methylphenol was flagged "J". The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1805872-001

- Surrogate recovery for 4-Terphenyl-d14 was above the upper acceptance limit for field sample FB12 in Lab Batch ID 38192. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1808F16-001

- Surrogate recovery for DNOP was at the upper acceptance limit for field sample EB04 in Lab Batch ID 40016. No DRO or MRO were reported above the detection limit. The associated detected field sample results for DRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1808F55-007

- Surrogate recovery for BFB was above the upper acceptance limit for field sample MKTF-17 in Lab Batch ID G53798. GRO was reported above the detection limit. The data was qualified "J+" due to potential high bias.

Lab Report 1808H79-002

- Surrogate recovery for BFB was above the upper acceptance limit for field sample OW-59 in Lab Batch ID G53866. GRO was reported above the detection limit. The data was qualified "J+" due to potential high bias.

- Surrogate recovery for 2-Fluorophenol, and 2,4,6-Tribromophenol were below the lower acceptance limit for field sample OW-59 in Lab Batch ID 40131. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1808H79-055

- Surrogate recovery for BFB was above the upper acceptance limit for field sample OW-56 in Lab Batch ID G53866. GRO was reported above the detection limit. The data was qualified "J+" due to potential high bias.

Lab Report 1808H79-011

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-15 in Lab Batch ID 340131. The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, 2-methylphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1808I45-004

- Surrogate recovery for Nitrobenzene-d5, and 2-Fluorobiphenyl were below the lower acceptance limit for field sample MKTF-41 in Lab Batch ID 40131. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1808J13-004

- Surrogate recovery for DNOP was below the lower acceptance limit for field sample MKTF-43 in Lab Batch ID 40147. No DRO or MRO were reported above the detection limit. The associated detected field sample results for DRO and MRO are qualified "UJ-" due to a potential low bias.

Lab Report 1808J13-004

- Surrogate recovery for 2-Fluorophenol, Phenol-d5, and 2,4,6-Tribromophenol were below the lower acceptance limit for field sample MKTF-43 in Lab Batch ID 40141. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1808J13-007 (Lab Batch ID 40294)

- Sample MKTF-13 formed a heavy emulsion during the extraction process. All of the surrogate recoveries are low due to this emulsion. The sample was re-extracted, past the holding time, to confirm the low surrogate recoveries and the data results. The second analysis results for naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene was flagged "H" (holding times for preparation or analysis exceeded). The lab recommended that naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene data be used from the Method 8260 analysis. The data was qualified "R" (unusable).

Lab Report 1808J13-004

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample DUP09 in Lab Batch ID 40147. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1808J13-010

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample FB10 in Lab Batch ID 40147. DRO and MRO were not detected. The associated detected field sample results for DRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1808J13-014

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample MKTF-20 in Lab Batch ID 40147. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1808J13-015

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample MKTF-16 in Lab Batch ID 40147. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1809B69-004

- Surrogate recovery for BFB was above the upper acceptance limit for field sample SMW-2 in Lab Batch ID G54343. GRO was reported above the detection limit. The data was qualified "J+" due to potential high bias.

Lab Report 1809B69-004

- Surrogate recovery for 2-Fluorophenol, and 2,4,6-Tribromophenol were below the lower acceptance limit for field sample SMW-2 in Lab Batch ID 40558. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809C83-001

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample OW-30 in Lab Batch ID 40544. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1809C83-002

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample FB19 in Lab Batch ID 40544. DRO and MRO were not detected. The associated detected field sample results for DRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1809C83-003

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample OW-12 in Lab Batch ID 40544. DRO and MRO were not detected. The associated detected field sample results for DRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1809C83-004

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample PW-4 in Lab Batch ID 40588. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809C83-006

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample DUP20 in Lab Batch ID 40544. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1809227-004

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-11 in Lab Batch ID 40263. The associated detected field sample results for 1-methylnaphthalene was flagged "J". The associated detected field sample results

for aniline, 2,4-dimethylphenol, 2-methylnaphthalene, 2-methylphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1809227-005

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-10 in Lab Batch ID 40263. The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, 2-methylphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1809409-011

- Surrogate recovery for 2-Fluorophenol, Phenol-d5, and 2,4,6-Tribromophenol were below the lower acceptance limit for surface water sample EP-7 in Lab Batch ID 40294. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809409-012

- Surrogate recovery for 2-Fluorophenol, Phenol-d5, and 2,4,6-Tribromophenol were below the lower acceptance limit for surface water sample EP-8 in Lab Batch ID 40294. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809409-014

- Surrogate recovery for 2-Fluorophenol, 2,4,6-Tribromophenol, Nitrobenzene-d5, and 2-Fluorobiphenyl were below the lower acceptance limit for surface water sample EP-11 in Lab Batch ID 40294. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809409-014

- Surrogate recovery for Nitrobenzene-d5, and 2-Fluorobiphenyl were below the lower acceptance limit for surface water sample EP-12A in Lab Batch ID 40294. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1809884-002

- Surrogate recovery for Nitrobenzene-d5 was below the lower acceptance limit for field sample MW-4 in Lab Batch ID 40466. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1811A37-004

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample PW-4 in Lab Batch ID 41702. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1811A37-005

- Surrogate recovery for BFB was above the upper acceptance limit for field sample OAPIS-1 in Lab Batch ID G55859. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

Lab Report 1811A96-004

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-11 in Lab Batch ID 41702. The associated detected field sample results for aniline, 1-methylnaphthalene, and 2-methylnaphthalene were flagged "J". The associated detected field sample results for 2,4-dimethylphenol, 2-methylphenol, 3+4-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1811A96-005

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample MKTF-10 in Lab Batch ID 41702. The associated detected field sample results for 2-methylphenol and 3+4-methylphenol were flagged "J". The associated detected field sample results for 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1811A96-006

- Surrogate recovery for BFB was above the upper acceptance limit for field sample MKTF-39 in Lab Batch ID G55859. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

Lab Report 1811A96-008

- Surrogate recovery for 2-Fluorophenol was below the lower acceptance limit for field sample Duplicate in Lab Batch ID 41702. The associated detected field sample results for 3+4-methylphenol was flagged "J". The associated detected field sample results for bis(2-ethylhexyl) phthalate, 2,4-dimethylphenol, 1-methylnaphthalene, 2-methylnaphthalene, 2-methylphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1811D80-003

- Surrogate recovery for BFB was above the upper acceptance limit for field sample MKTF-2 in Lab Batch ID W55986. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

Lab Report 1809D80-009

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample MKTF-33 in Lab Batch ID 41801. DRO was reported above the detection limit. The associated detected field sample results for DRO is qualified "J+" due to a potential high bias. MRO was not detected and the associated sample results for MRO is qualified "UJ+" due to a potential high bias.

Lab Report 1809D80-009

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample MKTF-33 in Lab Batch ID 41855. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1811D80-010

- Surrogate recovery for DNOP was above the higher acceptance limit for field sample MKTF-34 in Lab Batch ID 41801. DRO and MRO were not detected. The associated detected field sample results for DRO and MRO are qualified "UJ+" due to a potential high bias.

Lab Report 1809D80-010

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample MKTF-34 in Lab Batch ID 41855. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1811E76-004

- Surrogate recovery for 2-Fluorophenol and 2-Fluorobiphenyl were below the lower acceptance limit for field sample MKTF-20 in Lab Batch ID 41855. The associated detected field sample results for 2-methylnaphthalene and 2-methylphenol were flagged "J". The associated detected field sample results for benzoic acid, bis(2-ethylhexyl) phthalate, 2,4-dimethylphenol, 1-methylnaphthalene, 3+4-methyphenol, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1811E76-006

- Surrogate recovery for 2-Fluorobiphenyl was below the lower acceptance limit for field sample OW-57 in Lab Batch ID 41855. The associated detected field sample results for benzoic acid, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenol are qualified "J-" due to a potential low bias.

Lab Report 1811E76-008

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample OW-58 in Lab Batch ID 41855. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Lab Report 1811442-004

- Surrogate recovery for BFB was above the upper acceptance limit for field sample OW-59 in Lab Batch ID G55538. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

Lab Report 1811442-004

- Surrogate recovery for 2-Fluorophenol and 2-Fluorobiphenyl were below the lower acceptance limit for field sample OW-59 in Lab Batch ID 41498. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

- Surrogate recovery for 4-Bromofluorobenzene was above the upper acceptance limit for field sample OW-59 in Lab Batch ID R55623. The associated detected field sample results for acetone and methylene chloride were flagged "J". The associated detected field sample results for MTBE is qualified "J+" due to a potential high bias.

Lab Report 1811442-005

- Surrogate recovery for BFB was above the upper acceptance limit for field sample OW-56 in Lab Batch ID G55538. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

Lab Report 1811442-008

- Surrogate recovery for BFB was above the upper acceptance limit for field sample Duplicate in Lab Batch ID G55538. The associated detected field sample results for GRO was qualified "J+" due to a potential high bias.

- Surrogate recovery for 4-Bromofluorobenzene was above the upper acceptance limit for field sample Duplicate in Lab Batch ID R55623. The associated detected field sample results for acetone was flagged "J". The associated detected field sample results for MTBE is qualified "J+" due to a potential high bias.

Lab Report 1811857-008

- Surrogate recovery for Nitrobenzene-d5 was below the lower acceptance limit for field sample MKTF-24 in Lab Batch ID 41637. The associated detected field sample results for benzoic acid was flagged "J". No additional semi-volatile constituents were reported above the detection limit. Data qualification was not required

Lab Report 1811E76-008

- Surrogate recovery for all surrogates were below the lower acceptance limit for field sample MKTF-31 in Lab Batch ID 41637. No semi-volatile constituents were reported above the detection limit. Data qualification was not required.

Data qualification for surrogate recovery is shown on Table H-2.

2.6 LCS RECOVERY AND RELATIVE PERCENT DIFFERENCE

LCS/LCS duplicates were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated batch, then the analyte results were qualified "J+" to account for a potential high bias.

- If the analyte recovery was below acceptance limits for LCS or LCS duplicate then the analyte results in the associated analytical batch were qualified ("UJ-" for non-detects and "J-" for detected results) to account for a potential low bias.

LCS/LCSD percent recoveries and relative percent differences (RPDs) were within acceptance limits with exception to the following:

Lab Report 1802C47

- The data for 4-Nitrophenol was flagged "S" (% Recovery outside of range due to dilution or matrix). The surrogate was within acceptable recovery limits in the method blank in Lab Batch ID 36704. No data was qualified.

Lab Report 1802C78

- The data for 4-Nitrophenol was flagged "S". The surrogate was within acceptable recovery limits in the method blank in Lab Batch ID 36704. No data was qualified.

Lab Report 1802818

- The data for 4-Nitrophenol was flagged "S". The surrogate was within acceptable recovery limits in the method blank in Lab Batch ID 36560. No data was qualified.

Lab Report 1802938

- The data for 4-Nitrophenol was flagged "S". The surrogate was within acceptable recovery limits in the method blank in Lab Batch ID 36560. No data was qualified.

Lab Report 1805028

- The data for surrogate 4-Terphenyl-d14 was flagged "S" in Lab Batch ID 37947. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1805106

- The data for surrogate 4-Terphenyl-d14 was flagged "S" in Lab Batch ID 37947. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1805201

- The data for surrogate 4-Terphenyl-d14 was flagged "S" in Lab Batch ID 37947. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1805275

- The data for surrogate 4-Terphenyl-d14 was flagged "S" in Lab Batch ID 38002. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1805323

- The data for surrogate 4-Terphenyl-d14 was flagged "S" in Lab Batch ID 38002. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1805651

- The RPD limits in the LCSD for acenaphthene, 4-chloro-3-methyphenol, 2,4-

dinitrotoluene, 4-nitrophenol, pentachlorophenol, and pyrene were exceeded. The data for 2,4-dinitrotoluene, 4-nitrophenol, pentachlorophenol, and pyrene were flagged "S". None of these constituents were detected in Lab Batch ID 38139. No data was qualified.

Lab Report 1805682

- The RPD limits in the LCSD for acenaphthene, 4-chloro-3-methyphenol, 2,4-dinitrotoluene, 4-nitrophenol, pentachlorophenol, and pyrene were exceeded. The data for 2,4-dinitrotoluene, 4-nitrophenol, pentachlorophenol, and pyrene were flagged "S". None of these constituents were detected in Lab Batch ID 38139. No data was qualified.

Lab Report 1805682

- The data for iron (total) in the LCSLL was flagged "S". Iron was not detected in the method blank in Lab Batch ID 38259. No data was qualified.

Lab Report 1805682

- The data for iron (total) in the LCSLL was flagged "S". Iron was not detected in the method blank in Lab Batch ID 38259. No data was qualified.

Lab Report 1808B32

- The data for fluoride in the LCS was flagged "S". Fluoride was not detected in the method blank in Lab Batch ID A53556. No data was qualified.

Lab Report 1808D32

- The data for fluoride in the LCS was flagged "S". Fluoride was not detected in the method blank in Lab Batch ID A53658. No data was qualified.

Lab Report 1808E67

- The data for fluoride in the LCS was flagged "S". Fluoride was not detected in the method blank in Lab Batch ID R53678. No data was qualified.

Lab Report 1808E67

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 39989. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1808H79

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40466. The surrogate was not detected in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1808I45

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40466. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1808J13

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40294. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1808J13

- The data for biochemical oxygen demand (BOD) in the LCS was flagged "S" in Lab Batch ID 40097. BOD was not detected in the method blank. No data was qualified.

Lab Report 1808J13

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40466. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 180932

- The data for copper (total) in the LCSLL was flagged "S". Fluoride was detected in the method blank in Lab Batch ID 40361 and was flagged "J". The fluoride data was qualified "J+".

Lab Report 180932

- The data for copper (total) in the LCSLL was flagged "BS". Fluoride was detected in the method blank in Lab Batch ID 40362. Fluoride was not detected in Lab Batch 40362. No data was qualified.

Lab Report 1809409

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40294. The surrogate was within acceptable recovery limits in the method blank. The other five surrogates were within limits. No data was qualified.

Lab Report 1809712

- The data for fluoride in the LCS was flagged "S". Fluoride was not detected in the method blank in Lab Batch ID R54173. No data was qualified.

Lab Report 1809884

- The data for surrogate phenol-d5 in the LCS was flagged "S" in Lab Batch ID 40466. The surrogate was within the acceptable recovery range in the method blank and MS/MSD. The other five surrogates were within limits. No data was qualified.

Lab Report 1811D80

- The data for zinc in the LCSLL was flagged "S" in the Lab Batch ID 41820. The recovery of zinc in the LCS was acceptable. Zinc was not detected in the method blank in Lab Batch ID 41820. No data was qualified.

Lab Report 1811D80

- The data for zinc in the LCSLL was flagged "S" in the Lab Batch ID 42160. The recovery of zinc in the LCS was acceptable. Zinc was not detected in the method blank in Lab Batch ID 42160. No data was qualified.

Lab Report 1811D80

- The data for zinc in the LCSLL was flagged "S" in the Lab Batch ID 42189. The recovery of zinc in the LCS was acceptable. Zinc was not detected in the method blank in Lab Batch ID 42189. No data was qualified.

Lab Report 1811E76

- The data for zinc in the LCSLL was flagged "S" in the Lab Batch ID 41848. The recovery of zinc in the LCS was acceptable. Zinc was not detected in the method blank in Lab Batch ID 41848. No data was qualified.

Lab Report 1811E76

- The data for zinc in the LCSLL was flagged "S" in the Lab Batch ID 42160. The recovery of zinc in the LCS was acceptable. Zinc was not detected in the method blank in Lab Batch ID 42160. No data was qualified.

Lab Report 1811442

- The data for fluoride in the LCS was flagged "S". Fluoride was not detected in the method blank in Lab Batch ID R55509. No data was qualified.

Lab Report 1811695

- The LCS data for acenaphthene, 4-chloro-3-methyphenol, 2-chlorophenol, 1,4-dichlorobenzene, n-nitrosodi-n-propylamine, and 1,2,4-trichlorbenzene were flagged "S" in the Lab Batch ID 41637. None of these constituents were detected in the method blank in the Lab Batch 41637. The surrogates nitrobenzene-d5 and 2-fluorobiphenyl were flagged "S" in the Lab Batch ID 41637. No data was qualified.

Lab Report 1812130

- The data for surrogate phenol-d5 in the LCSD was flagged "S" in Lab Batch ID 41932. The surrogate was within the acceptable recovery range in the LCS and the method blank. The other five surrogates were within limits. No data was qualified.

Data qualification for LCS/LCSD percent recoveries and RPDs is shown on Table H-2.

2.7 MS/MSD RECOVERY AND RELATIVE PERCENT DIFFERENCE

MS/MSD samples were performed at the required frequency and were evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then analyte results were qualified "J+" to account for a potential high bias.
- Low MS/MSD recoveries for inorganic parameters result in sample qualification of the associated analytical batch with a "J-".
- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

Some lab reports do not report MS/MSD results if none of the samples included under that report were used for the MS/MSD; however, in many instances the sample used for the MS/MSD was a sample of similar matrix materials submitted by Marathon in a different data set and its MS/MSD results were included in other lab reports, which are included in this data validation review.

MS/MSD percent recoveries and RPDs were within acceptance limits with exception to the following:

Lab Report 1802C47

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID W49304 were qualified "J+". The RPD limit (50) in the

MS/MSD for 4-nitrophenol was exceeded (52.6). 4-Nitrophenol was not detected in Lab Batch ID 36704. No data was qualified.

Lab Report 1802370

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R49067 were qualified "J+". The RPD limits in the MS/MSD for acenaphthene, 2,4-dinitrotoluene, and N-nitrosodi-n-propylamine were exceeded. These constituents were not detected in Lab Batch ID 36704. No data was qualified.

Lab Report 1802818

- The RPD limits in the MSD for 4-Nitrophenol, and Phenol were exceeded. 4-Nitrophenol was not detected in Lab Batch ID 36560. No data was qualified.

Lab Report 1802938

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R49304 were qualified "J+".

Lab Report 1802951

- The data reported for phenol in the MS was flagged "S" (% Recovery outside of range due to dilution or matrix) in Lab Batch ID 36609. The phenol results for Lab Batch ID R49304 were qualified "J+".

Lab Report 1805028

- The RPD limits in the MSD for acenaphthene, and 2,4-dinitrotoluene, were exceeded. These constituents were not detected in Lab Batch ID 37947. No data was qualified.

Lab Report 1802951

- The data reported for 4-nitrophenol in the MS was flagged "S" (% Recovery outside of range due to dilution or matrix) in Lab Batch ID 38603. 4-Nitrophenol was not detected in Lab Batch ID 38063. No data was qualified.

Lab Report 1805651

- The RPD limit in the MSD for gasoline range organics was exceeded. These constituents were detected in Lab Batch ID A51264. The data for MKTF-42 (0.40 mg/L), MKTF-32 (0.64 mg/L), and DUP09 (0.36 mg/L) were qualified "J+".

Lab Report 1808B32

- The data reported for phenol in the MS was flagged "S" In Lab Batch ID 39925. The RPD limit in the MSD for phenol was exceeded. Phenol was not detected in the LCS, however, the surrogate Phenol-d5 was flagged "S" in Lab Batch ID 39925. The phenol data for MKTF-25 (23 ug/L) and DUP01 (34 ug/L) were qualified "J+".

Lab Report 1808D32

- The RPD limit in the MSD for 4-nitrophenol was exceeded. 4-Nitrophenol was not detected In Lab Batch ID 39989. The surrogate Phenol-d5 was flagged in the LCS in Lab Batch ID 39989. No data was qualified.

Lab Report 1808F16

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R53736 were qualified "J+".

Lab Report 1808F55

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R53749 were qualified "J+".

Lab Report 1808B32

- The data reported for 4-nitrophenol and pentachlorophenol in the MS was flagged "S" in Lab Batch ID 40558. 4-Nitrophenol in the MSD was flagged "S". The RPD limit in the MSD for 2,4-dinitrophenol and pentachlorophenol was exceeded. No semi-volatile constituents were detected in Lab Batch 40558. No data was qualified.

Lab Report 1809C83

- Subcontractor lab One Lab Nationwide - The cyanide data for the MSD was flagged "J3" (the associated batch QC was outside the established quality control range for precision) and "J6" (the sample matrix interfered with the ability to make any accurate determination; spike value is low). The LCS and LCSD were within recovery limits. The MSD was below the recovery limits. The reported cyanide concentration was non-detect. The cyanide results for PW-3 was qualified "UJ-".

Lab Report 1809227

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID W54111 were qualified "J+".
- The data reported for the surrogate 4-nitrophenol in the MSD was flagged "S" in Lab Batch ID 40263. The RPD limit in the MSD for 4-nitrophenol and pentachlorophenol was exceeded. The RPD limits in the MSD and LCS in Lab Batch ID 40263 were within the limits. No data was qualified.

Lab Report 1809712

- The data reported for iron in the MS/MSD were flagged "S" in Lab Batch ID 40396. The RPD limit in the LCS and LCSLL for iron were within the limits. Iron was not detected in the method blank for Lab Batch ID 40396. No data was qualified.

Lab Report 1809C83

- Subcontractor lab One Lab Nationwide - The cyanide data for the MS/MSD was flagged "J6" (the sample matrix interfered with the ability to make any accurate determination; spike value is low) in Lab Batch ID WG117093. The LCS and LCSD were within recovery limits. The MS/MSD were below the recovery limits. The reported cyanide concentration was non-detect. The cyanide results for SMW-4 was qualified "UJ-".

Lab Report 1809878

- Subcontractor lab One Lab Nationwide - The chemical oxygen demand (COD) data for the MS/MSD in Lab Batch ID WG1168058 was flagged "J5" (the sample matrix interfered with the ability to make any accurate determination; spike value is high). The LCS and LCSD were within recovery limits. The MS/MSD were above the recovery limits. The COD results for EP-2, EP-3, EP-4, and EP-5 were qualified "J+".

Lab Report 1809884

- The RPD limits in the MSD for acenaphthene, 2-chlorophenol, 1,4-dichlorobenzene, n-nitrosodi-n-propylamine, phenol and 1,2,4-trichlorobenzene were exceeded. These constituents were not detected in the method blank in Lab Batch ID 40466. No data was qualified.

Lab Report 1809884

- Subcontractor lab One Lab Nationwide - The cyanide data for the MS/MSD in Lab Batch ID

WG118671 was flagged "J6" (the sample matrix interfered with the ability to make any accurate determination; spike value is low). The LCS and LCSD were within recovery limits. The MS/MSD were below the recovery limits. The reported cyanide concentration was non-detect. The cyanide data for FB 16 was qualified "UJ-".

Lab Report 1811D80

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R56045 were qualified "J+".

Lab Report 1811E76

- The values reported for benzene in the MS/MSD were above the quantitation range. The benzene results for Lab Batch ID R56074 were qualified "J+".

Lab Report 1811857

- The data reported for 4-nitrophenol in the MS was flagged "S" in Lab Batch ID 41637. 4-Nitrophenol was within acceptable limits in the MSD and was not detected in the method blank for Lab Batch ID 41637. No data was qualified.

2.8 DUPLICATES

2.8.1 Field Duplicates

Field duplicates were collected at a rate as stated in the Order and Permit. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table H-3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 25 percent for ground water samples.
- If an analyte was detected at a concentration that is less than five times the method reporting limit, then the difference between the sample and the field duplicate should not exceed the method reporting limit.
- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for those summarized in Table H-4.

3.0 COMPLETENESS SUMMARY

The following equation was used to calculate the technical completeness:

$$\% \text{ Technical Completeness} = \left(\frac{Number\ of\ usable\ results}{Number\ of\ reported\ results}\right) x100$$

The technical completeness attained for Annual and Semi-Annual monitoring activities conducted in 2018 was 100 percent for all parameter with the exception of the SVOCs. SVOC data from Sample MKTF-13 (Lab Report 1808J13-007/Lab Batch ID 40294/3rd Quarter) was qualified "R" (unusable) in Table H-2. The percent technical compliance for SVOCs was 99.66 percent.

The completeness results are provided in Table H-5. The analytical results for the required analytes per the Permit were considered usable for the intended purposes and the project DQOs have been met.

Table I-1
Sample Indentification - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
MKTF-25	1802370-001	2/5/2018	GW
MKTF-31	1802370-002	2/5/2018	GW
MKTF-40	1802370-003	2/5/2018	GW
DUP01	1802370-004	2/5/2018	FD
TRIP BLANK	1802370-005	2/5/2018	TB
MKTF-30	1802570-001	2/6/2018	GW
MKTF-28	1802570-002	2/6/2018	GW
MKTF-27	1802570-003	2/6/2018	GW
MKTF-29	1802570-004	2/6/2018	GW
MKTF-24	1802570-005	2/6/2018	GW
MKTF-02	1802570-006	2/6/2018	GW
DUP02	1802570-007	2/6/2018	FD
MKTF-43	1802570-008	2/7/2018	GW
MKTF-32	1802570-009	2/7/2018	GW
MKTF-41	1802570-010	2/7/2018	GW
MKTF-42	1802570-011	2/7/2018	GW
DUP03	1802570-012	2/7/2018	FD
TRIP BLANK	1802570-013	2/7/2018	TB
MKTF-44	1802641-001	2/8/2018	GW
MKTF-33	1802641-002	2/8/2018	GW
MKTF-22	1802641-003	2/8/2018	GW
MKTF-11	1802641-004	2/8/2018	GW
MKTF-39	1802641-005	2/8/2018	GW
DUP 04	1802641-006	2/8/2018	FD
Trip Blank	1802641-007	2/8/2018	TB
STP1-NW	1802642-001	2/9/2018	GW
NAPIS-2	1802642-002	2/9/2018	GW
KA-3	1802642-003	2/9/2018	GW
NAPIS-3	1802642-004	2/9/2018	GW
OAPIS-1	1802642-005	2/9/2018	GW
DUP 05	1802642-006	2/9/2018	FD
Trip Blank	1802642-007	2/9/2018	TB
STP-1 and EP-2	1802816-001	2/12/2018	GW
MKTF-38	1802818-001	2/12/2018	GW
TRIP BLANK	1802818-002	2/12/2018	TB
EAST LDU	1802819-001	2/12/2018	GW
WEST LDU	1802819-002	2/12/2018	GW
DUP06	1802819-003	2/12/2018	FD
MKTF-04	1802938-001	2/14/2018	GW

Table I-1
Sample Indentification - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
MKTF-10	1802938-002	2/14/2018	GW
MKTF-09	1802938-003	2/14/2018	GW
DUP07	1802938-004	2/14/2018	FD
Trip Blank	1802938-005	2/14/2018	TB
MKTF-16	1802951-001	2/15/2018	GW
MKTF-20	1802951-002	2/15/2018	GW
MKTF-21	1802951-003	2/15/2018	GW
MKTF-36	1802951-004	2/15/2018	GW
MKTF-35	1802951-005	2/15/2018	GW
DUP08	1802951-006	2/15/2018	FD
Trip Blank	1802951-007	2/15/2018	TB
MKTF-17	1802951-008	2/16/2018	GW
MKTF-19	1802951-009	2/16/2018	GW
MKTF-34	1802951-010	2/16/2018	GW
MKTF-18	1802951-011	2/16/2018	GW
DUP09	1802951-012	2/16/2018	FD
OW-57	1802c47-001	2/20/2018	GW
RW-2	1802c47-002	2/20/2018	GW
OW-58	1802c47-003	2/20/2018	GW
DUP10	1802c47-004	2/20/2018	FD
TRIP BLANK	1802c47-005	2/20/2018	TB
EP-2	1802c78-001	2/21/2018	SW
EP-3	1802c78-002	2/21/2018	SW
EP-4	1802c78-003	2/21/2018	SW
EP-5	1802c78-004	2/21/2018	SW
EP-6	1802c78-005	2/21/2018	SW
Trip Blank	1802c78-006	2/21/2018	TB
EP-12B	1802d25-001	2/22/2018	SW
EP-8	1802d25-002	2/23/2018	SW
EP-7	1802d25-003	2/23/2018	SW
EP-11	1802d25-004	2/23/2018	SW
EP-12	1802d25-005	2/23/2018	SW
EP-9	1802d25-006	2/23/2018	SW
OW-60	1802d26-001	2/22/2018	GW
OW-59	1802d26-002	2/22/2018	GW
OW-54	1802d26-003	2/22/2018	GW
OW-56	1802d26-004	2/22/2018	GW
OW-55	1802d26-005	2/22/2018	GW
DUP11	1802d26-006	2/22/2018	FD

Table I-1
Sample Indentification - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
TRIP BLANK	1802d26-007	2/22/2018	TB
BW-5C	1802e43-001	2/26/2018	GW
BW-5B	1802e43-002	2/26/2018	GW
TRIP BLANK	1802e43-003	2/26/2018	TB
OW-1	1803047-001	2/27/2018	GW
OW-10	1803047-002	2/27/2018	GW
DUP 12	1803047-003	2/27/2018	FD
OW-29	1803047-004	2/27/2018	GW
OW-14	1803047-005	2/27/2018	GW
Trip Blank	1803047-006	2/27/2018	TB
EP-9	1803065-001	3/1/2018	SW
EP-6	1803065-002	3/1/2018	SW
EP-5	1803065-003	3/1/2018	SW
EP-4	1803065-004	3/1/2018	SW
EP-3	1803065-005	3/1/2018	SW
EP-2	1803065-006	3/1/2018	SW
EP-8	1803065-007	3/1/2018	SW
EP-7	1803065-008	3/1/2018	SW
EP-11	1803065-009	3/1/2018	SW
EP-12	1803065-010	3/1/2018	SW
EP-12B	1803065-011	3/1/2018	SW
PW-4	1803072-001	3/1/2018	GW
Trip Blank	1803072-002	3/1/2018	TB
OW-30	1803089-001	2/28/2018	GW
OW-13	1803089-002	2/28/2018	GW
DUP13	1803089-003	2/28/2018	FD
TRIP BLANK	1803089-004	2/28/2018	TB

NOTES:

GW = GROUNDWATER
FD = FIELD DUPLICATE
SW = SURFACE WATER
LDU = LEAK DETECTION UNIT
TB = TRIP BLANK
EB = EQUIPMENT BLANK
FB = FIELD BLANK

Table I-1
Sample Indentification - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
FB01	1805028-001	4/29/2018	FB
EB01	1805028-002	4/29/2018	EB
OW-63	1805028-003	4/29/2018	GW
OW-64	1805028-004	4/29/2018	GW
OW-62	1805028-005	4/29/2018	GW
DUP01	1805028-006	4/29/2018	FD
Trip Blank	1805028-007	4/29/2018	TB
EB02	1805106-001	4/30/2018	EB
EAST LDU	1805106-002	4/30/2018	LDU
WEST LDU	1805106-003	4/30/2018	LDU
FB02	1805106-004	4/30/2018	FB
NAPIS-2	1805106-005	4/30/2018	GW
KA-3	1805106-006	4/30/2018	GW
NAPIS-3	1805106-007	4/30/2018	GW
OAPIS-1	1805106-008	4/30/2018	GW
STP-1-NW	1805106-009	4/30/2018	GW
DUP02	1805106-010	4/30/2018	FD
TRIP BLANK	1805106-011	4/30/2018	TB
EB03	1805201-001	5/1/2018	EB
FB03	1805201-002	5/1/2018	FB
MKTF-30	1805201-003	5/1/2018	GW
MKTF-29	1805201-004	5/1/2018	GW
MKTF-28	1805201-005	5/1/2018	GW
MKTF-24	1805201-006	5/1/2018	GW
MKTF-02	1805201-007	5/1/2018	GW
MKTF-27	1805201-008	5/1/2018	GW
DUP03	1805201-009	5/1/2018	FD
TRIP BLANK	1805201-010	5/1/2018	TB
MKTF-15	1805275-001	5/2/2018	GW
MKTF-04	1805275-002	5/2/2018	GW
MKTF-11	1805275-003	5/2/2018	GW
EB04	1805275-004	5/2/2018	EB
FB04	1805275-005	5/2/2018	FB
MKTF-10	1805275-006	5/2/2018	GW
MKTF-09	1805275-007	5/2/2018	GW
DUP04	1805275-008	5/2/2018	FD
TRIP BLANK	1805275-009	5/2/2018	TB
EB05	1805323-001	5/3/2018	EB
FB05	1805323-002	5/3/2018	FB

Table I-1
Sample Indentification - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
MKTF-38	1805323-003	5/3/2018	GW
MKTF-37	1805323-004	5/3/2018	GW
MKTF-36	1805323-005	5/3/2018	GW
MKTF-35	1805323-006	5/3/2018	GW
DUP05	1805323-007	5/3/2018	FD
FB06	1805323-008	5/4/2018	FB
EB06	1805323-009	5/4/2018	EB
MKTF-34	1805323-010	5/4/2018	GW
MKTF-17	1805323-011	5/4/2018	GW
MKTF-19	1805323-012	5/4/2018	GW
MKTF-18	1805323-013	5/4/2018	GW
DUP06	1805323-014	5/4/2018	FD
TRIP BLANK	1805323-015	5/4/2018	TB
EB07	1805416-001	5/6/2018	EB
FB07	1805416-002	5/6/2018	FB
MKTF-25	1805416-003	5/6/2018	GW
MKTF-31	1805416-004	5/6/2018	GW
STP-1 to EP-2	1805416-005	5/6/2018	SW
MKTF-40	1805416-006	5/6/2018	GW
MKTF-39	1805416-007	5/6/2018	GW
DUP07	1805416-008	5/6/2018	FD
Trip Blank	1805416-009	5/6/2018	TB
OW-60	1805523-001	5/8/2018	GW
OW-59	1805523-002	5/8/2018	GW
OW-56	1805523-003	5/8/2018	GW
OW-55	1805523-004	5/8/2018	GW
OW-54	1805523-005	5/8/2018	GW
OW-57	1805523-006	5/8/2018	GW
RW-2	1805523-007	5/8/2018	GW
DUP08	1805523-008	5/8/2018	FD
EB08	1805523-009	5/8/2018	EB
FB08	1805523-010	5/8/2018	FB
OW-58	1805523-011	5/8/2018	GW
Trip Blank	1805523-012	5/8/2018	TB
MKTF-42	1805651-001	5/9/2018	GW
EB09	1805651-002	5/9/2018	EB
FB09	1805651-003	5/9/2018	FB
MKTF-32	1805651-004	5/9/2018	GW
MKTF-41	1805651-005	5/9/2018	GW

Table I-1
Sample Indentification - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
MKTF-43	1805651-006	5/9/2018	GW
DUP09	1805651-007	5/9/2018	FD
TRIP BLANK	1805651-008	5/9/2018	TB
FB10	1805682-001	5/10/2018	FB
MKTF-44	1805682-002	5/10/2018	GW
MKTF-33	1805682-003	5/10/2018	GW
MKTF-22	1805682-004	5/10/2018	GW
EB10	1805682-005	5/10/2018	EB
MKTF-13	1805682-006	5/10/2018	GW
DUP10	1805682-007	5/10/2018	FD
TRIP BLANK	1805682-008	5/10/2018	TB
FB11	1805682-009	5/11/2018	FB
EB11	1805682-010	5/11/2018	EB
MKTF-21	1805682-011	5/11/2018	GW
MKTF-20	1805682-012	5/11/2018	GW
MKTF-16	1805682-013	5/11/2018	GW
FB12	1805872-001	5/14/2018	FB
BW-5C	1805872-002	5/14/2018	GW
BW-5B	1805872-003	5/14/2018	GW
DUP 11	1805872-004	5/14/2018	FD
Trip Blank	1805872-005	5/14/2018	TB
FB13	1805972-001	5/15/2018	FB
OW-1	1805972-002	5/15/2018	GW
OW-10	1805972-003	5/15/2018	GW
OW-13	1805972-004	5/15/2018	GW
OW-14	1805972-005	5/15/2018	GW
DUP12	1805972-006	5/15/2018	FD
Trip Blank	1805972-007	5/15/2018	TB
OW-30	1805A27-001	5/16/2018	GW
FB14	1805A27-002	5/16/2018	FB
OW-29	1805A27-003	5/16/2018	GW
DUP13	1805A27-004	5/16/2018	FD
Trip Blank	1805A27-005	5/16/2018	TB

NOTES:

GW = GROUNDWATER
FD = FIELD DUPLICATE
SW = SURFACE WATER
LDU = LEAK DETECTION UNIT
TB = TRIP BLANK
EB = EQUIPMENT BLANK
FB = FIELD BLANK

Table I-1
Sample Indentification - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
FB01	1808B32-001	8/17/2018	FB
EB01	1808B32-002	8/17/2018	EB
MKTF-25	1808B32-003	8/17/2018	GW
MKTF-31	1808B32-004	8/17/2018	GW
MKTF-40	1808B32-005	8/17/2018	GW
DUP01	1808B32-006	8/17/2018	FD
TRIP BLANK	1808B32-007	8/17/2018	TB
FB02	1808D32-001	8/20/2018	FB
EB02	1808D32-002	8/20/2018	EB
MKTF-30	1808D32-003	8/20/2018	GW
MKTF-29	1808D32-004	8/20/2018	GW
MKTF-24	1808D32-005	8/20/2018	GW
MKTF-02	1808D32-006	8/20/2018	GW
MKTF-28	1808D32-007	8/20/2018	GW
MKTF-27	1808D32-008	8/20/2018	GW
DUP02	1808D32-009	8/20/2018	FD
Trip Blank	1808D32-010	8/20/2018	TB
FB03	1808E67-001	8/21/2018	FB
EB03	1808E67-002	8/21/2018	EB
MKTF-38	1808E67-003	8/21/2018	GW
MKTF-39	1808E67-004	8/21/2018	GW
DUP03	1808E67-005	8/21/2018	FD
Trip Blank	1808E67-006	8/21/2018	TB
FB04	1808F16-001	8/22/2018	FB
EB04	1808F16-002	8/22/2018	EB
OW-63	1808F16-003	8/22/2018	GW
OW-64	1808F16-004	8/22/2018	GW
OW-62	1808F16-005	8/22/2018	GW
DUP04	1808F16-006	8/22/2018	FD
Trip Blank	1808F16-007	8/22/2018	TB
MKTF-37	1808F55-001	8/23/2018	GW
FB05	1808F55-002	8/23/2018	FB
EB05	1808F55-003	8/23/2018	EB
MKTF-35	1808F55-004	8/23/2018	GW
DUP05	1808F55-005	8/23/2018	FD
MKTF-34	1808F55-006	8/24/2018	GW
MKTF-17	1808F55-007	8/24/2018	GW
MKTF-19	1808F55-008	8/24/2018	GW
FB06	1808F55-009	8/24/2018	FB

Table I-1
Sample Indentification - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
EB06	1808F55-010	8/24/2018	EB
MKTF-18	1808F55-011	8/24/2018	GW
DUP06	1808F55-012	8/24/2018	FD
Trip Blank	1808F55-013	8/24/2018	TB
OW-60	1808H79-001	8/28/2018	GW
OW-59	1808H79-002	8/28/2018	GW
OW-54	1808H79-003	8/28/2018	GW
OW-55	1808H79-004	8/28/2018	GW
OW-56	1808H79-005	8/28/2018	GW
OW-57	1808H79-006	8/28/2018	GW
FB07	1808H79-007	8/28/2018	FB
EB07	1808H79-008	8/28/2018	EB
RW-2	1808H79-009	8/28/2018	GW
OW-58	1808H79-010	8/28/2018	GW
MKTF-15	1808H79-011	8/28/2018	GW
MKTF-32	1808H79-012	8/28/2018	GW
DUP07	1808H79-013	8/28/2018	FD
Trip Blank	1808H79-014	8/28/2018	TB
FB08	1808I45-001	8/29/2018	FB
EB08	1808I45-002	8/29/2018	EB
MKTF-42	1808I45-003	8/29/2018	GW
MKTF-41	1808I45-004	8/29/2018	GW
DUP08	1808I45-005	8/29/2018	FD
Trip Blank	1808I45-006	8/29/2018	TB
FB09	1808J13-001	8/30/2018	FB
EB09	1808J13-002	8/30/2018	EB
MKTF-44	1808J13-003	8/30/2018	GW
MKTF-43	1808J13-004	8/30/2018	GW
MKTF-33	1808J13-005	8/30/2018	GW
MKTF-22	1808J13-006	8/30/2018	GW
MKTF-13	1808J13-007	8/30/2018	GW
DUP09	1808J13-008	8/30/2018	FD
STP-1 to EP-2	1808J13-009	8/31/2018	SW
FB10	1808J13-010	8/31/2018	FB
EB10	1808J13-011	8/31/2018	EB
MKTF-21	1808J13-012	8/31/2018	GW
DUP10	1808J13-013	8/31/2018	FD
MKTF-20	1808J13-014	8/31/2018	GW
MKTF-16	1808J13-015	8/31/2018	GW

Table I-1
Sample Indentification - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
TRIP BLANK	1808J13-016	8/31/2018	TB
FB11	1809227-001	9/4/2018	FB
EB11	1809227-002	9/4/2018	EB
MKTF-04	1809227-003	9/4/2018	GW
MKTF-11	1809227-004	9/4/2018	GW
MKTF-10	1809227-005	9/4/2018	GW
MKTF-09	1809227-006	9/4/2018	GW
DUP11	1809227-007	9/4/2018	FD
Trip Blank	1809227-008	9/4/2018	TB
MKTF-36	1809375-001	9/5/2018	GW
DUP12	1809375-002	9/5/2018	FD
TRIP BLANK	1809375-003	9/5/2018	TB
FB12	1809409-001	9/6/2018	FB
EB12	1809409-002	9/6/2018	EB
STP-1-NW	1809409-003	9/6/2018	GW
OAPIS-1	1809409-004	9/6/2018	GW
DUP13	1809409-005	9/6/2018	FD
EP-2	1809409-006	9/6/2018	SW
EP-3	1809409-007	9/6/2018	SW
EP-4	1809409-008	9/6/2018	SW
EP-5	1809409-009	9/6/2018	SW
EP-6	1809409-010	9/7/2018	SW
EP-7	1809409-011	9/7/2018	SW
EP-8	1809409-012	9/7/2018	SW
EP-9	1809409-013	9/7/2018	SW
EP-11	1809409-014	9/7/2018	SW
EP-12A	1809409-015	9/7/2018	SW
EP-12B	1809409-016	9/7/2018	SW
Trip Blank	1809409-017	9/7/2018	TB
FB13	1809583-001	9/10/2018	FB
BW-5C	1809583-002	9/10/2018	GW
BW-5B	1809583-003	9/10/2018	GW
DUP14	1809583-004	9/10/2018	FD
TRIP BLANK	1809583-005	9/10/2018	TB
OW-1	1809712-001	9/11/2018	GW
FB14	1809712-002	9/11/2018	FB
OW-10	1809712-003	9/11/2018	GW
OW-13	1809712-004	9/11/2018	GW
OW-14	1809712-005	9/11/2018	GW

Table I-1
Sample Indentification - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
OW-29	1809712-006	9/11/2018	GW
DUP15	1809712-007	9/11/2018	FD
TRIP BLANK	1809712-008	9/11/2018	TB
BW-1C	1809856-001	9/12/2018	GW
FB-15	1809856-002	9/12/2018	FB
BW-2A	1809856-003	9/12/2018	GW
BW-2B	1809856-004	9/12/2018	GW
BW-3B	1809856-005	9/12/2018	GW
SMW-4	1809856-006	9/12/2018	GW
DUP16	1809856-007	9/12/2018	FD
TRIP BLANK	1809856-008	9/12/2018	TB
FB 16	1809884-001	9/13/2018	FB
MW-4	1809884-002	9/13/2018	GW
MW-1	1809884-003	9/13/2018	GW
MW-2	1809884-004	9/13/2018	GW
DUP 17	1809884-005	9/13/2018	FD
Trip Blank	1809884-006	9/13/2018	TB
EP-2	1809878-001	9/14/2018	SW
EP-3	1809878-002	9/14/2018	SW
EP-4	1809878-003	9/14/2018	SW
EP-5	1809878-004	9/14/2018	SW
EP-6	1809878-005	9/14/2018	SW
EP-7	1809878-006	9/14/2018	SW
EP-8	1809878-007	9/14/2018	SW
EP-9	1809878-008	9/14/2018	SW
EP-11	1809878-009	9/14/2018	SW
EP-12B	1809878-010	9/14/2018	SW
FB17	1809A73-001	9/17/2018	FB
MW-5	1809A73-002	9/17/2018	GW
OW-50	1809A73-003	9/17/2018	GW
OW-52	1809A73-005	9/17/2018	GW
DUP18	1809A73-006	9/17/2018	FD
BW-2C	1809B69-001	9/18/2018	GW
FB18	1809B69-002	9/18/2018	FB
BW-3C	1809B69-003	9/18/2018	GW
SMW-2	1809B69-004	9/18/2018	GW
OW-11	1809B69-005	9/18/2018	GW
DUP19	1809B69-006	9/18/2018	FD
TRIP BLANK	1809B69-007	9/18/2018	TB

Table I-1
Sample Indentification - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
OW-30	1809C83-001	9/19/2018	GW
FB19	1809C83-002	9/19/2018	FB
OW-12	1809C83-003	9/19/2018	GW
PW-4	1809C83-004	9/19/2018	GW
PW-3	1809C83-005	9/19/2018	GW
DUP20	1809C83-006	9/19/2018	FD
Trip Blank	1809C83-007	9/19/2018	TB

NOTES:

GW = GROUNDWATER
FD = FIELD DUPLICATE
SW = SURFACE WATER
TB = TRIP BLANK
EB = EQUIPMENT BLANK
FB = FIELD BLANK

Table I-1
Sample Indentification - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
Field Blank	1811442-001	11/7/2018	FB
TRIP BLANK	1811442-002	11/7/2018	TB
OW-60	1811442-003	11/7/2018	GW
OW-59	1811442-004	11/7/2018	GW
OW-56	1811442-005	11/7/2018	GW
OW-55	1811442-006	11/7/2018	GW
OW-54	1811442-007	11/7/2018	GW
Duplicate	1811442-008	11/7/2018	FD
Field Blank	1811445-001	11/6/2018	FB
OW-14	1811445-002	11/6/2018	GW
OW-29	1811445-003	11/6/2018	GW
OW-13	1811445-004	11/6/2018	GW
TRIP BLANK	1811445-005	11/6/2018	TB
TRIP BLANK	1811496-001	11/7/2018	TB
Field Blank	1811496-002	11/7/2018	FB
OW-50	1811496-003	11/7/2018	GW
OW-52	1811496-004	11/7/2018	GW
TRIP BLANK	1811496-005	11/8/2018	TB
Field Blank	1811496-006	11/8/2018	FB
STP1 to EP2	1811496-007	11/8/2018	SW
OW-01	1811496-008	11/8/2018	GW
OW-10	1811496-009	11/8/2018	GW
Duplicate	1811496-010	11/8/2018	FD
Trip Blank	1811695-001	11/13/2018	TB
Field Blank	1811695-002	11/13/2018	FB
BW-5B	1811695-003	11/13/2018	GW
BW-4B	1811695-004	11/13/2018	GW
BW-5C	1811695-005	11/13/2018	GW
DUPLICATE	1811695-006	11/13/2018	FD
Trip Blank	1811857-001	11/15/2018	TB
Field Blank	1811857-002	11/15/2018	FB
MKTF-44	1811857-003	11/15/2018	GW
MKTF-42	1811857-004	11/15/2018	GW
MKTF-32	1811857-005	11/15/2018	GW
MKTF-41	1811857-006	11/15/2018	GW
MKTF-43	1811857-007	11/15/2018	GW
MKTF-24	1811857-008	11/15/2018	GW
MKTF-25	1811857-009	11/15/2018	GW
MKTF-31	1811857-010	11/15/2018	GW

Table I-1
Sample Indentification - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
MKTF-40	1811857-011	11/15/2018	GW
MKTF-27	1811857-012	11/15/2018	GW
MKTF-30	1811857-013	11/15/2018	GW
Duplicate	1811857-014	11/15/2018	FD
MKTF-29	1811857-015	11/15/2018	GW
MKTF-28	1811857-016	11/15/2018	GW
Field Blank	1811A37-001	11/19/2018	FB
Trip Blank	1811A37-002	11/19/2018	TB
STP1-NW	1811A37-003	11/19/2018	GW
PW-4	1811A37-004	11/19/2018	GW
OAPIS-1	1811A37-005	11/19/2018	GW
Field Blank	1811A96-001	11/20/2018	FB
Trip Blank	1811A96-002	11/20/2018	TB
MKTF-4	1811A96-003	11/20/2018	GW
MKTF-11	1811A96-004	11/20/2018	GW
MKTF-10	1811A96-005	11/20/2018	GW
MKTF-39	1811A96-006	11/20/2018	GW
MKTF-38	1811A96-007	11/20/2018	GW
Duplicate	1811A96-008	11/20/2018	FD
PW-3	1811A96-009	11/20/2018	GW
Field Blank	1811D80-001	11/28/2018	FB
Trip Blank	1811D80-002	11/28/2018	TB
MKTF-2	1811D80-003	11/28/2018	GW
MKTF-9	1811D80-004	11/28/2018	GW
MKTF-13	1811D80-005	11/28/2018	GW
MKTF-17	1811D80-006	11/28/2018	GW
MKTF-19	1811D80-007	11/28/2018	GW
MKTF-22	1811D80-008	11/28/2018	GW
MKTF-33	1811D80-009	11/28/2018	GW
MKTF-34	1811D80-010	11/28/2018	GW
MKTF-35	1811D80-011	11/28/2018	GW
DUPLICATE	1811D80-012	11/28/2018	FD
MKTF-18	1811D80-013	11/28/2018	GW
Field Blank	1811E76-001	11/29/2018	FB
Trip Blank	1811E76-002	11/29/2018	TB
MKTF-16	1811E76-003	11/29/2018	GW
MKTF-20	1811E76-004	11/29/2018	GW
MKTF-21	1811E76-005	11/29/2018	GW
OW-57	1811E76-006	11/29/2018	GW

Table I-1
Sample Indentification - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Sample ID	Lab Sample ID	Sample Date	Sample Type
DUPLICATE	1811E76-007	11/29/2018	FD
OW-58	1811E76-008	11/29/2018	GW
OW-62	1811E76-009	11/29/2018	GW
Field Blank	1812130-001	12/3/2018	FB
Trip Blank	1812130-002	12/3/2018	TB
OW-63	1812130-003	12/3/2018	GW
OW-30	1812130-004	12/3/2018	GW

NOTES:

GW = GROUNDWATER
FD = FIELD DUPLICATE
SW = SURFACE WATER
TB = TRIP BLANK
EB = EQUIPMENT BLANK
FB = FIELD BLANK

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-25	02/05/18	Benzene	2000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch R49067
MKTF-31	02/05/18	Benzene	1.3	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch R49067
MKTF-40	02/05/18	Benzene	0.19	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch R49067
DUP01	02/05/18	Benzene	2000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch R49067
TRIP BLANK	02/05/18	Benzene	0.35	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch R49067
MKTF-30	02/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-29	02/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP02	02/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-41	02/07/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-42	02/07/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP03	02/07/18	Phosphorus, Orthophosphate (As P)	3.2	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
MKTF-44	02/08/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-33	02/08/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-22	02/08/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-11	02/08/18	Phosphorus, Orthophosphate (As P)	3.4	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
MKTF-39	02/08/18	Phosphorus, Orthophosphate (As P)	4.3	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
DUP04	02/08/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
STP1-NW	02/09/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-39	02/09/18	Phosphorus, Orthophosphate (As P)	2.7	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
MKTF-04	02/14/18	Benzene	900	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
MKTF-10	02/14/18	Benzene	10000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
MKTF-09	02/14/18	Benzene	2700	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
DUP07	02/14/18	Benzene	890	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
MKTF-16	02/15/18	Benzene	1800	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-20	02/15/18	Benzene	12000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
MKTF-21	02/15/18	Benzene	3400	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49304
MKTF-36	02/15/18	Benzene	8400	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49323
MKTF-16	02/15/18	Phenol	230	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
MKTF-20	02/15/18	Phenol	230	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
MKTF-21	02/15/18	Phenol	35	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
MKTF-36	02/15/18	Phenol	67	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
DUP08	02/15/18	Phenol	21	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
MKTF-17	02/15/18	Phenol	7.1	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
MKTF-19	02/15/18	Phenol	14	ug/L	GW	J+	Qualified high bias - % Recovery outside of range due to dilution or matrix in the MS - batch 36609
OW-57	02/20/18	Benzene	12000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49433
OW-57	02/20/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
RW-2	02/20/18	Benzene	42000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49433
OW-58	02/20/18	Benzene	33000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49433
OW-58	02/20/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP 10	02/20/18	Benzene	33000	ug/L	GW	J+	Qualified high bias - Value above quantitaton range in MS/MSD batch W49433
EP-2	02/21/18	2-Methylphenol	110	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-2	02/21/18	3+4-Methylphenol	290	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-2	02/21/18	Phenol	460	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-3	02/21/18	2-Methylphenol	110	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
EP-3	02/21/18	3+4-Methylphenol	350	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-3	02/21/18	Phenol	450	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-4	02/21/18	3+4-Methylphenol	310	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-4	02/21/18	Phenol	380	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-4	02/21/18	3+4-Methylphenol	220	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-4	02/21/18	Phenol	290	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-5	02/21/18	3+4-Methylphenol	220	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-5	02/21/18	Phenol	290	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-6	02/21/18	Phenol	130	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
OW-59	02/22/18	Gasoline Range Organics	0.13	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-56	02/22/18	Gasoline Range Organics	0.13	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
DUP11	02/22/18	Gasoline Range Organics	0.14	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
EP-12	02/23/18	3+4-Methylphenol	190	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
EP-12	02/23/18	Phenol	250	ug/L	SW	J-	Qualified low bias - low surrogate recovery due to dilution to matrix
OW-1	02/27/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-10	02/27/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP12	02/27/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB01	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB01	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-63	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-64	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-64	04/29/18	Gasoline Range Organics	17	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-64	04/29/18	2-Methylphenol	31	ug/L	GW	J-	Qualified low bias - low surrogate recovery
OW-64	04/29/18	Naphthalene	18	ug/L	GW	J-	Qualified low bias - low surrogate recovery
OW-62	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
DUP01	04/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB02	04/30/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
EB02	04/30/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
EB02	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB02	04/30/18	Cadimium (Total)	0.00082	mg/L	GW	J+	Qualified high bias - detection of cadimium in equipment blank and method blank
EB02	04/30/18	1,2,4-Trimethylbenzene	0.2	ug/L	GW	J+	Qualified high bias - 1,2,4-trimethylbenzene detected in equipment blank and method blank
FB02	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB02	04/30/18	1,2,4-Trimethylbenzene	0.16	ug/L	GW	J+	Qualified high bias - 1,2,4-trimethylbenzene detected in field blank and method blank
NAPIS-2	04/30/18	Gasoline Range Organics	0.59	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
NAPIS-2	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
KA-3	04/30/18	Gasoline Range Organics	2.9	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
KA-3	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
NAPIS-3	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OAPIS-1	04/30/18	Gasoline Range Organics	0.46	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OAPIS-1	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
STP-1-NW	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP02	04/30/18	Gasoline Range Organics	0.61	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
DUP02	04/30/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB03	05/01/18	Chloride	0.15	mg/L	GW	J+	Qualified high bias - detection of chloride in equipment blank and method blank
EB03	05/01/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB03	05/01/18	Mercury	0.000064	mg/L	GW	J+-	Qualified high bias - detection of mercury in equipment blank and method blank
FB03	05/01/18	Chloride	0.21	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB03	05/01/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB03	05/01/18	Mercury	0.000063	mg/L	GW	J+-	Qualified high bias - detection of mercury in field blank and method blank
MKTF-30	05/01/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP03	05/01/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB04	05/02/18	Mercury	0.000048	mg/L	GW	J+-	Qualified high bias - detection of mercury in equipment blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
EB04	05/02/18	Toluene	0.84	ug/L	GW	J+-	Qualified high bias - detection of toluene in equipment blank and method blank
FB04	05/02/18	Mercury	0.000047	mg/L	GW	J+-	Qualified high bias - detection of mercury in field blank and method blank
FB04	05/02/18	Toluene	0.59	ug/L	GW	J+-	Qualified high bias - detection of toluene in field blank and method blank
MKTF-15	05/02/18	Benzoic acid	130	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-15	05/02/18	2,4-Dimethylphenol	70	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-15	05/02/18	2-Methylphenol	350	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-15	05/02/18	3+4-Methylphenol	230	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-15	05/02/18	Naphthalene	44	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-15	05/02/18	Phenol	660	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-11	05/02/18	Aniline	12	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	05/02/18	2,4-Dimethylphenol	33	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	05/02/18	2-Methylphenol	120	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	05/02/18	3+4-Methylphenol	150	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	05/02/18	Naphthalene	39	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	05/02/18	Phenol	52	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	2,4-Dimethylphenol	17	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	1-Methylnaphthalene	42	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	2-Methylnaphthalene	55	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	2-Methylphenol	21	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	3+4-Methylphenol	22	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	Naphthalene	110	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	05/02/18	Phenol	36	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP04	05/02/18	2,4-Dimethylphenol	70	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	1-Methylnaphthalene	18	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	2-Methylnaphthalene	18	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	2-Methylphenol	300	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	3+4-Methylphenol	200	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	Naphthalene	56	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUP04	05/02/18	Phenol	460	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
TRIP BLANK	05/02/18	1,2,4-Trimethylbenzene	0.15	ug/L	GW	J+	Qualified high bias - 1,2,4-trimethylbenzene detected in trip blank and in method blank
EB05	05/03/18	Phosphorus, Orthophosphate (As P)	0.12	mg/L	GW	J-	Qualified high bias - detection of phosphorus, orthophosphate (as P) in equipment blank and method blank
EB05	05/03/18	Sodium (Dissolved)	0.37	mg/L	GW	J+	Qualified high bias - detection of sodium in equipment blank and method blank
EB05	05/03/18	Benzoic acid	12	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
EB05	05/03/18	Toluene	0.35	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
FB05	05/03/18	Sodium (Dissolved)	0.19	mg/L	GW	J+	Qualified high bias - detection of sodium in field blank and method blank
FB06	05/04/18	Phosphorus, Orthophosphate (As P)	0.10	mg/L	GW	J-	Qualified high bias - detection of phosphorus, orthophosphate (as P) in field blank and method blank
FB06	05/04/18	Sodium (Dissolved)	0.19	mg/L	GW	J+	Qualified high bias - detection of sodium in field blank and method blank
EB06	05/04/18	Phosphorus, Orthophosphate (As P)	0.12	mg/L	GW	J-	Qualified high bias - detection of phosphorus, orthophosphate (as P) in equipment blank and method blank
EB06	05/04/18	Sodium (Dissolved)	0.35	mg/L	GW	J+	Qualified high bias - detection of sodium in equipment blank and method blank
EB07	05/06/18	Chloride	0.11	mg/L	GW	J+	Qualified high bias - detection of chloride in equipment blank and method blank
EB07	05/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB07	05/06/18	Mercury	0.000038	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB07	05/06/18	Benzoic acid	20	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
FB07	05/06/18	Chloride	0.11	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB07	05/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB07	05/06/18	Mercury	0.000037	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB07	05/06/18	Benzoic acid	16	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
MKTF-25	05/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-31	05/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
STP-1 TO EP-2	05/06/18	Biochemical Oxygen Demand	770	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-40	05/06/18	Chloride	4800	mg/L	GW	J+	Qualified high bias - Value above quantitaton range and chloride detected in method blank below screening level (250 mg/L).
OW-59	05/08/18	Phosphorus, Orthophosphate (As P)	<25	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-55	05/08/18	1-Methylnaphthalene	14	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-55	05/08/18	Naphthalene	17	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-55	05/08/18	Phenol	20	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	05/08/18	1-Methylnaphthalene	38	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	05/08/18	2-Methylnaphthalene	10	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	05/08/18	Naphthalene	25	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	05/08/18	Phenol	27	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-58	05/08/18	Benzoic acid	25	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-58	05/08/18	1-Methylnaphthalene	74	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-58	05/08/18	2-Methylnaphthalene	42	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-58	05/08/18	Naphthalene	99	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-58	05/08/18	Phenol	50	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
EB09	05/09/18	Chloride	0.14	mg/L	GW	J+	Qualified high bias - detection of chloride in equipment blank and method blank
EB09	05/09/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB09	05/09/18	Mercury	0.000063	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB09	05/09/18	1-Methylnaphthalene	0.74	ug/L	GW	J+	Qualified high bias - detection of 1-methylnaphthalene in equipment blank and method blank
EB09	05/09/18	2-Methylnaphthalene	0.5	ug/L	GW	J+	Qualified high bias - detection of 2-methylnaphthalene in equipment blank and method blank
FB09	05/09/18	Chloride	0.12	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB09	05/09/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB09	05/09/18	Mercury	0.000063	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
Trip Blank	05/09/18	Benzene	0.33	ug/L	GW	J+	Qualified high bias - benzene detected in trip blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-42	05/09/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-42	05/09/18	Gasoline Range Organics	0.4	mg/L	GW	J+	Qualified high bias - RPD limit in the MSD was exceeded
MKTF-32	05/09/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
MKTF-32	05/09/18	Gasoline Range Organics	0.64	mg/L	GW	J+	Qualified high bias - RPD limit in the MSD was exceeded
MKTF-41	05/09/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP09	05/09/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP09	05/09/18	Gasoline Range Organics	0.36	mg/L	GW	J+	Qualified high bias - RPD limit in the MSD was exceeded
TRIP BLANK	05/09/18	1-Methylnaphthalene	0.72	ug/L	GW	J+	Qualified high bias - 1-methylnaphthalene detected in trip blank and method blank
TRIP BLANK	05/09/18	2-Methylnaphthalene	0.52	ug/L	GW	J+	Qualified high bias - 2-methylnaphthalene detected in trip blank and method blank
FB10	05/10/18	Sodium (Dissolved)	0.35	mg/L	GW	J+	Qualified high bias - detection of sodium in field blank and method blank
FB10	05/10/18	Mercury	0.000038	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
EB10	05/10/18	Sodium (Dissolved)	0.44	mg/L	GW	J+	Qualified high bias - detection of sodium in equipment blank and method blank
EB10	05/10/18	Mercury	0.000060	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB10	05/10/18	Benzene	0.33	ug/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
MKTF-13	05/10/18	2,4-Dimethylphenol	14	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-13	05/10/18	1-Methylnaphthalene	74	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-13	05/10/18	2-Methylnaphthalene	85	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-13	05/10/18	Naphthalene	120	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-13	05/10/18	Phenol	30	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
FB11	05/11/18	Mercury	0.000063	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
EB11	05/11/18	Sodium (Dissolved)	0.25	mg/L	GW	J+	Qualified high bias - detection of sodium in equipment blank and method blank
EB11	05/11/18	Mercury	0.000058	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
FB12	05/14/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-5C	05/14/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
BW-5B	05/14/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP-11	05/14/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB-13	05/15/18	Chloride	0.21	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB-13	05/15/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB-13	05/15/18	Mercury	0.000085	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
OW-1	05/15/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-10	05/15/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP12	05/15/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB-14	05/16/18	Mercury	0.000047	mg/L	GW	J+	Qualified high bias - detection of mercury in method blank and field blank
FB01	08/17/18	Chloride	0.28	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB01	08/17/18	Mercury	0.000071	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB01	08/17/18	Benzoic Acid	6.8	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB01	08/17/18	Gasoline Range Organics	0.036	mg/L	GW	J+	Qualified high bias - detection of GRO in field blank and method blank
EB01	08/17/18	Mercury	0.000073	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB01	08/17/18	Benzoic Acid	6.7	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
EB01	08/17/18	Gasoline Range Organics	0.018	mg/L	GW	J+	Qualified high bias - detection of GRO in equipment blank and method blank
MKTF-25	08/17/18	Phenol	23	ug/L	GW	J+	Qualified high bias - MS/MSD flagged
DUP01	08/17/18	Phenol	34	ug/L	GW	J+	Qualified high bias - MS/MSD flagged
FB02	08/20/18	Chloride	0.21	mg/L	GW	J+	Qualified high bias - detection of chloride in field blank and method blank
FB02	08/20/18	Phosphorus, Orthophosphate (As P)	0.27	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
FB02	08/20/18	Benzoic Acid	8.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB02	08/20/18	Gasoline Range Organics	0.023	mg/L	GW	J+	Qualified high bias - detection of GRO in field blank and method blank
EB02	08/20/18	Chloride	0.20	mg/L	GW	J+	Qualified high bias - detection of chloride in equipment blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
EB02	08/20/18	Phosphorus, Orthophosphate (As P)	0.26	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
EB02	08/20/18	Benzoic Acid	7.6	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
EB02	08/20/18	Gasoline Range Organics	0.033	mg/L	GW	J+	Qualified high bias - detection of GRO in equipment blank and method blank
MKTF-30	08/20/18	Phosphorus, Orthophosphate (As P)	1.5	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
DUP02	08/20/18	Phosphorus, Orthophosphate (As P)	1.4	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
Trip Blank	08/20/18	Gasoline Range Organics	0.022	mg/L	GW	J+	Qualified high bias - detection of GRO in trip blank and method blank.
FB03	08/21/18	Phosphorus, Orthophosphate (As P)	0.26	mg/L	GW	J+	Qualified high bias - detection of phosphorus, orthophosphate (as P) in field blank and method blank
FB03	08/21/18	Sulfate	1.1	mg/L	GW	J+	Qualified high bias - detection of sulfate in field blank and method blank
FB03	08/21/18	Benzoic Acid	7.6	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB03	08/21/18	Gasoline Range Organics	0.021	mg/L	GW	J+	Qualified high bias - detection of GRO in field blank and method blank
EB03	08/21/18	Phosphorus, Orthophosphate (As P)	0.26	mg/L	GW	J+	Qualified high bias - detection of phosphorus, orthophosphate (as P) in equipment blank and method blank
EB03	08/21/18	Mercury	0.000046	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB03	08/21/18	Benzoic Acid	6.7	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
EB03	08/21/18	Gasoline Range Organics	0.021	mg/L	GW	J+	Qualified high bias - detection of GRO in equipment blank and method blank
DUP03	08/21/18	Phosphorus, Orthophosphate (As P)	1.6	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
FB04	08/22/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB04	08/22/18	Benzoic Acid	7.9	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB04	08/22/18	Acetone	13	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank and field blank
EB04	08/22/18	Chloride	0.20	mg/L	GW	J+	Qualified high bias - detection of chloride in equipment blank and method blank
EB04	08/22/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
EB04	08/22/18	Benzoic Acid	7.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
EB04	08/22/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
EB04	08/22/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
EB04	08/22/18	Acetone	13	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank and equipment blank
OW-63	08/22/18	Benzene	9000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-63	08/22/18	Acetone	590	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank
OW-64	08/22/18	Acetone	46	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank
OW-64	08/22/18	Benzene	180	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-62	08/22/18	Acetone	24	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank
OW-62	08/22/18	Benzene	2700	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
DUP04	08/22/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP04	08/22/18	Acetone	330	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank
DUP04	08/22/18	Benzene	8600	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
Trip Blank	08/22/18	Acetone	8.8	ug/L	GW	J+	Qualified high bias - value above the quantitaion range and the detection of acetone in the method blank
Trip Blank	08/22/18	Benzene	0.43	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-37	08/23/18	Benzene	1300	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
FB05	08/23/18	Mercury	0.000065	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
FB05	08/23/18	Benzoic Acid	7.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB05	08/23/18	Benzene	0.31	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
EB05	08/23/18	Mercury	0.000075	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB05	08/23/18	Benzoic Acid	6.5	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
MKTF-35	08/23/18	Benzene	11	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
DUP05	08/23/18	Benzene	1300	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-34	08/24/18	Benzene	0.34	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
FB06	08/24/18	Mercury	0.000063	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB06	08/24/18	Benzoic Acid	6.7	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
EB06	08/24/18	Mercury	0.000059	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB06	08/24/18	Benzoic Acid	6.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
MKTF-17	08/24/18	Gasoline Range Organics	4.7	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-34	08/24/18	Benzene	2.7	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-19	08/24/18	Benzene	1700	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-18	08/24/18	Benzene	190	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-60	08/28/18	Phosphorus, Orthophosphate (As P)	0.9	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
OW-59	08/28/18	Gasoline Range Organics	0.064	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-54	08/28/18	Phosphorus, Orthophosphate (As P)	0.9	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
OW-55	08/28/18	Phosphorus, Orthophosphate (As P)	3.1	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
OW-56	08/28/18	Gasoline Range Organics	0.59	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-56	08/28/18	Phosphorus, Orthophosphate (As P)	1.9	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
OW-57	08/28/18	Phosphorus, Orthophosphate (As P)	2.7	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
MKTF-15	08/28/18	2,4-Dimethylphenol	59	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-15	08/28/18	1-Methylnaphthalene	14	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-15	08/28/18	2-Methylnaphthalene	14	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-15	08/28/18	2-Methylphenol	370	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-15	08/28/18	3+4-Methylphenol	170	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-15	08/28/18	Naphthalene	50	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-15	08/28/18	Phenol	440	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
FB08	08/29/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB08	08/29/18	Mercury	0.000076	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB08	08/29/18	Mercury	0.000071	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB08	08/29/18	Benzoic Acid	100	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
EB08	08/29/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB08	08/29/18	Copper (Total)	0.0047	mg/L	GW	J+	Qualified high bias - detection of copper in equipment blank and method blank
EB08	08/29/18	Mercury	0.000063	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB08	08/29/18	Mercury	0.000068	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB08	08/29/18	Benzoic Acid	6.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
MKTF-42	08/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP08	08/29/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB09	08/30/18	Acetone	11	ug/L	GW	J+	Qualified high bias - detection of acetone in field blank and method blank
FB09	08/30/18	Gasoline Range Organics	0.013	mg/L	GW	J+	Qualified high bias - detection of GRO in field blank and method blank
FB09	08/30/18	Benzoic Acid	7.6	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB09	08/30/18	Zinc (Total)	0.0037	mg/L	GW	J+	Qualified high bias - detection of zinc in field blank and method blank
EB09	08/30/18	Acetone	4.6	ug/L	GW	J+	Qualified high bias - detection of acetone in equipment blank and method blank
EB09	08/30/18	Benzoic Acid	7.4	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
EB09	08/30/18	Zinc (Total)	0.0035	mg/L	GW	J+	Qualified high bias - detection of zinc in equipment blank and method blank
MKTF-43	08/30/18	Diesel Range Organics	<1.0	mg/L	GW	UJ-	Qualified low bias - low recovery in surrogate.
MKTF-43	08/30/18	Motor Oil Organics	<5.0	mg/L	GW	UJ-	Qualified low bias - low recovery in surrogate.
MKTF-13	08/30/18	1-Methylnaphthalene	41	ug/L	GW	R	Data is unusable - analysis outside holding time.
MKTF-13	08/30/18	2-Methylnaphthalene	46	ug/L	GW	R	Data is unusable - analysis outside holding time.
MKTF-13	08/30/18	Naphthalene	57	ug/L	GW	R	Data is unusable - analysis outside holding time.
DUP09	08/30/18	Diesel Range Organics	1.8	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
DUP09	08/30/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
FB10	08/31/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
FB10	08/31/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
FB10	08/31/18	Gasoline Range Organics	0.021	mg/L	GW	J+	Qualified high bias - detection of GRO in field blank and method blank
FB10	08/31/18	Benzoic Acid	6.6	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
EB10	08/31/18	Benzoic Acid	9.8	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in equipment blank and method blank
MKTF-20	08/31/18	Diesel Range Organics	11	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-20	08/31/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
MKTF-16	08/31/18	Diesel Range Organics	3.3	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-16	08/31/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
MKTF-16	08/31/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB11	09/04/18	Benzoic Acid	7.8	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
EB11	09/04/18	Benzoic Acid	7.9	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
MKTF-04	09/04/18	Benzene	1100	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-11	09/04/18	Benzene	10000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-11	09/04/18	Aniline	11	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	09/04/18	2,4-Dimethylphenol	38	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	09/04/18	2-Methylnaphthalene	11	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	09/04/18	2-Methylphenol	110	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	09/04/18	3+4-Methylphenol	120	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-11	09/04/18	Naphthalene	47	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	09/04/18	Phenol	56	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	Benzene	10000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-10	09/04/18	2,4-Dimethylphenol	13	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	1-Methylnaphthalene	50	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	2-Methylnaphthalene	64	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	2-Methylphenol	10	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	3+4-Methylphenol	10	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	Naphthalene	130	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	09/04/18	Phenol	30	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-09	09/04/18	Benzene	2700	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
DUP11	09/04/18	Benzene	1100	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
DUP11	09/04/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB12	09/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB12	09/06/18	Mercury	0.000046	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB12	09/06/18	Potassium	0.13	mg/L	GW	J+	Qualified high bias - detection of potassium in field blank and method blank
FB12	09/06/18	Mercury	0.000095	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
EB12	09/06/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
EB12	09/06/18	Mercury	0.000060	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB12	09/06/18	Mercury	0.000056	mg/L	GW	J+	Qualified high bias - detection of mercury in equipment blank and method blank
EB12	09/06/18	Copper (Total)	0.0085	mg/L	GW	J+	Qualified high bias - detection of copper in equipment blank, method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
STP-1-NW	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
STP-1-NW	09/06/18	Copper (Total)	0.0072	mg/L	GW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
OAPIS-1	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OAPIS-1	09/06/18	Copper (Total)	0.013	mg/L	GW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
DUP13	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP13	09/06/18	Copper (Total)	0.0058	mg/L	GW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-2	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-2	09/06/18	Copper (Total)	0.01	mg/L	SW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-3	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-3	09/06/18	Copper (Total)	0.0075	mg/L	SW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-4	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-4	09/06/18	Copper (Total)	0.0067	mg/L	SW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-5	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-5	09/06/18	Copper (Total)	0.0045	mg/L	SW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-6	09/06/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-7	09/06/18	Phosphorus, Orthophosphate (As P)	<10	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-8	09/07/18	Phosphorus, Orthophosphate (As P)	<10	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-8	09/06/18	Copper (Total)	0.029	mg/L	SW	J+	Qualified high bias - detection of copper in method blank and flagged with the % recovery outside of range due to dilution or matrix in the LCSLL
EP-9	09/07/18	Phosphorus, Orthophosphate (As P)	<10	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-11	09/07/18	Phosphorus, Orthophosphate (As P)	8.6	mg/L	SW	J-	Qualified low bias - analysis outside holding time.
EP-12A	09/07/18	Phosphorus, Orthophosphate (As P)	<10	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
EP-12B	09/07/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	SW	UJ-	Qualified low bias - analysis outside holding time.
FB13	09/10/18	Phosphorus, Orthophosphate (As P)	0.17	mg/L	GW	J+	Qualified high bias - detection of phosphorus, orthophosphate in field blank and method blank

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
FB13	09/10/18	Mercury	0.000050	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
OW-1	09/11/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB14	09/11/18	Phosphorus, Orthophosphate (As P)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB14	09/11/18	Mercury	0.00015	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
FB14	09/11/18	Mercury	0.00014	mg/L	GW	J+	Qualified high bias - detection of mercury in field blank and method blank
DUP15	09/11/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-1C	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-1C	09/12/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB-15	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
FB-15	09/12/18	Phosphorus, Orthophosphate (As P)	11	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
BW-2A	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-2A	09/12/18	Phosphorus, Orthophosphate (As P)	0.71	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
BW-2B	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-3B	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
SMW-4	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP16	09/12/18	1,4-Dioxane	<10	ug/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP16	09/12/18	Phosphorus, Orthophosphate (As P)	0.85	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
FB 16	09/13/18	Benzoic Acid	6.8	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
FB17	09/17/18	Benzoic Acid	6.8	ug/L	GW	J+	Qualified high bias - detection of benzoic acid in field blank and method blank
DUP18	09/17/18	Nitrogen, Nitrite (As N)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP18	09/17/18	Nitrogen, Nitrite (As N)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP18	09/17/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
BW-2C	09/18/18	Phosphorus, Orthophosphate (As P)	0.91	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
FB-18	09/18/18	Phosphorus, Orthophosphate (As P)	0.17	mg/L	GW	J-	Qualified low bias - analysis outside holding time.
SMW-2	09/18/18	Gasoline Range Organics	0.25	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
DUP19	09/18/18	Nitrogen, Nitrite (As N)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP19	09/18/18	Nitrogen, Nitrite (As N)	<0.50	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
DUP19	09/18/18	Phosphorus, Orthophosphate (As P)	0.86	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
OW-30	09/19/18	Diesel Range Organics	3.3	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-30	09/19/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
FB19	09/19/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
FB19	09/19/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
OW-12	09/19/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
OW-12	09/19/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
PW-4	09/19/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
PW-3	09/19/18	Phosphorus, Orthophosphate (As P)	<2.5	mg/L	GW	UJ-	Qualified low bias - analysis outside holding time.
PW-3	09/19/18	Cyanide	<0.005	mg/L	GW	UJ-	Qualified low bias - low recovery in MSD
DUP20	09/19/18	Diesel Range Organics	1.4	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
DUP20	09/19/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
Field Blank	11/07/18	Acetone	2.1	ug/L	GW	J+	Qualified high bias - detection of acetone in field blank and method blank
Trip Blank	11/07/18	Acetone	1.6	ug/L	GW	J+	Qualified high bias - detection of acetone in trip blank and method blank
OW-59	11/07/18	Gasoline Range Organics	18	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-59	11/07/18	MTBE	7.7	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-56	11/07/18	Gasoline Range Organics	0.31	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
Duplicate	11/07/18	Gasoline Range Organics	0.15	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
Duplicate	11/07/18	MTBE	8.0	ug/L	GW	J+	Qualified high bias - high recovery in surrogate.
OW-50	11/07/18	pH	8.3	pH units	GW	J-	Qualified low bias - analysis outside holding time.
OW-52	11/07/18	pH	8.35	pH units	GW	J-	Qualified low bias - analysis outside holding time.
OAPIS-1	11/19/18	Gasoline Range Organics	0.65	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-11	11/20/18	2,4-Dimethylphenol	28	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	11/20/18	2-Methylphenol	98	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	11/20/18	3+4-Methylphenol	100	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	11/20/18	Naphthalene	38	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-11	11/20/18	Phenol	92	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	11/20/18	2,4-Dimethylphenol	14	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	11/20/18	1-Methylnaphthalene	34	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	11/20/18	2-Methylnaphthalene	51	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	11/20/18	Naphthalene	98	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-10	11/20/18	Phenol	28	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-39	11/20/18	Gasoline Range Organics	0.25	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
Duplicate	11/20/18	bis(2-ethylhexyl)phthalate	13	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
Duplicate	11/20/18	2,4-Dimethylphenol	17	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
Duplicate	11/20/18	1-Methylnaphthalene	36	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
Duplicate	11/20/18	2-Methylnaphthalene	56	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
Duplicate	11/20/18	2-Methylphenol	11	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
Duplicate	11/20/18	Naphthalene	110	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
Duplicate	11/20/18	Phenol	34	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-2	11/28/18	Gasoline Range Organics	18	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-2	11/28/18	Benzene	5500	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-9	11/28/18	Benzene	3300	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-13	11/28/18	Benzene	4500	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-17	11/28/18	Benzene	3.6	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-19	11/28/18	Benzene	1900	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-22	11/28/18	Benzene	3000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-33	11/28/18	Diesel Range Organics	0.69	mg/L	GW	J+	Qualified high bias - high recovery in surrogate.
MKTF-33	11/28/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
MKTF-34	11/28/18	Diesel Range Organics	<1.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
MKTF-34	11/28/18	Motor Oil Organics	<5.0	mg/L	GW	UJ+	Qualified high bias - high recovery in surrogate.
MKTF-35	11/28/18	Benzene	19	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
DUPLICATE	11/28/18	Benzene	0.25	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-18	11/28/18	Benzene	0.9	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-16	11/29/18	Benzene	17000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-20	11/29/18	Benzene	3000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
MKTF-20	11/29/18	Benzoic Acid	23	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-20	11/29/18	bis(2-ethylhexyl)phthalate	12	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-20	11/29/18	2,4-Dimethylphenol	240	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-20	11/29/18	1-Methylnaphthalene	11	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.

Table I-2
Qualified Data Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

SAMPLE ID	DATE COLLECTED	ANALYTE	RESULTS	UNITS	SAMPLE TYPE	QUALIFIER	COMMENTS
MKTF-20	11/29/18	3+4-Methylphenol	16	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-20	11/29/18	Naphthalene	31	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-20	11/29/18	Phenol	28	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
MKTF-21	11/29/18	Benzene	2000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-57	11/29/18	Benzene	11000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-57	11/29/18	Benzoic Acid	37	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	11/29/18	1-Methylnaphthalene	54	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	11/29/18	2-Methylnaphthalene	13	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	11/29/18	Naphthalene	51	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
OW-57	11/29/18	Phenol	24	ug/L	GW	J-	Qualified low bias - low recovery in surrogate.
DUPLICATE	11/29/18	Benzene	11000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-58	11/29/18	Benzene	35000	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD
OW-62	11/29/18	Benzene	920	ug/L	GW	J+	Qualified high bias - value above the quantitaion range in the MS and MSD

Notes:

J- = Low bias J+ = High bias UJ - analyte was not detected, but results may be biased low

GW = Groundwater TB = Trip Blank FD = Field Duplicate EB = Equipment Blank

SW = Surface Water FB = Field Blank

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<5	<5	NC
1,1,1-Trichloroethane	14	15	6.9
1,1,2,2-Tetrachloroethane	<10	<10	NC
1,1,2-Trichloroethane	<5	1.7 J	NC
1,1-Dichloroethane	220	230	4.4
1,1-Dichloroethene	110	110	0.0
1,1-Dichloropropene	<5	<5	NC
1,2,3-Trichlorobenzene	<5	<5	NC
1,2,3-Trichloropropane	<10	<10	NC
1,2,4-Trichlorobenzene	<5	<5	NC
1,2,4-Trimethylbenzene	4 J	3.9 J	NC
1,2-Dibromo-3-chloropropane	<10	<10	NC
1,2-Dibromoethane (EDB)	<5	<5	NC
1,2-Dichloroethane (EDC)	10	9.4	6.2
1,2-Dichloropropane	<5	<5	NC
1,3,5-Trimethylbenzene	0.5 J	0.47 J	NC
1,3-Dichlorobenzene	<5	<5	NC
1,3-Dichloropropane	<5	<5	NC
1,4-Dichlorobenzene	<5	<5	NC
1-Methylnaphthalene	4.3 J	4.2 J	NC
2,2-Dichloropropane	<10	<10	NC
2-Butanone	<50	<50	NC
2-Chlorotoluene	<5	<5	NC
2-Hexanone	<50	<50	NC
2-Methylnaphthalene	<20	<20	NC
4-Chlorotoluene	<5	<5	NC
4-Isopropyltoluene	1.3 J	1.2 J	NC
4-Methyl-2-pentanone	<50	<50	NC
Acetone	25 J	28 J	NC
Benzene	2000	2000	0.0
Bromobenzene	<5	<5	NC
Bromodichloromethane	<5	<5	NC
Bromoform	<5	<5	NC
Bromomethane	<15	<15	NC
Carbon disulfide	<50	<50	NC
Carbon Tetrachloride	<5	<5	NC
Chlorobenzene	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chloroethane	<10	<10	NC
Chloroform	<5	<5	NC
Chloromethane	<15	<15	NC
cis-1,2-DCE	50	51	2.0
cis-1,3-Dichloropropene	<5	<5	NC
Dibromochloromethane	<5	<5	NC
Dibromomethane	<5	<5	NC
Dichlorodifluoromethane	<5	<5	NC
Ethylbenzene	110	110	0.0
Hexachlorobutadiene	<5	<5	NC
Isopropylbenzene	44	44	0.0
Methyl tert-butyl ether (MTBE)	250	250	0.0
Methylene Chloride	<15	<15	NC
Naphthalene	4.5 J	4.2 J	NC
n-Butylbenzene	15 J	15 J	NC
n-Propylbenzene	45	44	2.2
sec-Butylbenzene	6.9	6.9	0.0
Styrene	<5	<5	NC
tert-Butylbenzene	<5	<5	NC
Tetrachloroethene (PCE)	2.3 J	2.3 J	NC
Toluene	10	10	0.0
trans-1,2-DCE	<5	<5	NC
trans-1,3-Dichloropropene	<5	<5	NC
Trichloroethene (TCE)	25	25	0.0
Trichlorofluoromethane	<5	<5	NC
Vinyl chloride	3 J	3 J	NC
Xylenes, Total	9.7	9.2	5.3
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	0.58 J	0.57 J	NC
Gasoline Range Organics (GRO)	16	16	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	8.5 J	8.8 J	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	18 J	10 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	5.3 J	4.7 J	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	6.8 J	6.6 J	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0094	<0.0094	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.2	0.0
Chloride	520	490	5.9
Fluoride	<0.5	<0.5	NC
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	2.3 J	2.3 J	NC
Sulfate	27	28	3.6
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0041 J	0.0033 J	NC
Barium	0.28	0.27	3.6
Cadmium	<0.002	<0.002	NC
Calcium	110	110	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.7	0.69	1.4
Lead	0.00024 J	0.00029 J	NC
Magnesium	18	18	0.0
Manganese	2.6	2.6	0.0
Potassium	0.81 J	0.79 J	NC
Selenium	<0.005	<0.005	NC
Silver	0.0023 J	0.0024 J	NC
Sodium	520	530	1.9
Uranium	0.023	0.023	0.0
Zinc	0.0074 J	0.0064 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1802370-001	1802370-004	
	2/5/2018	2/5/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0035 J	0.0026 J	NC
Barium	0.42	0.42	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0023 J	NC
Copper	0.012	0.012	0.0
Iron	4.3	4.4	2.3
Lead	0.0062	0.0067	7.8
Manganese	3.2	3.1	3.2
Mercury	0.000067 J	0.000046 J	NC
Selenium	<0.01	<0.01	NC
Silver	0.0036 J	0.0036 J	NC
Uranium	0.028	0.026	7.4
Zinc	0.011	0.012	8.7

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	0.13 J	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	0.47 J	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	0.45 J	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	11	11	0.0
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.021 J	0.013 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	6.2 J	6.4 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.83	0.82	1.2
Chloride	160	150	6.5
Fluoride	0.81	0.76	6.4
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	560	540	3.6
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0036 J	0.0028 J	NC
Barium	0.024	0.023	4.3
Cadmium	<0.002	<0.002	NC
Calcium	70	71	1.4
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.031	0.027	13.8
Lead	<0.0005	<0.0005	NC
Magnesium	10	10	0.0
Manganese	0.49	0.49	0.0
Potassium	0.4 J	0.28 J	NC
Selenium	<0.005	<0.005	NC
Silver	0.0023 J	0.0025 J	NC
Sodium	470	470	0.0
Uranium	0.0094	0.0094	0.0
Zinc	0.0063 J	0.0084 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0014	<0.005	NC
Barium	0.17	0.15	12.5
Cadmium	<0.002	<0.002	NC
Chromium	0.0052 J	0.003 J	NC
Copper	0.0072	0.0065	10.2
Iron	3.9	2.8	**32.8**
Lead	0.0025	0.002	22.2
Manganese	0.65	0.59	9.7
Mercury	0.0001 J	0.000082 J	NC
Selenium	<0.01	<0.01	NC
Silver	<0.005	<0.005	NC
Uranium	0.01	0.01	0.0
Zinc	0.014	0.011	24.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

32.8

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	0.18 J	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	4.1 J	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	7.2 J	6.5 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	4.9	3.8	**25.3**
Chloride	8500	7000	19.4
Fluoride	<0.5	<0.5	NC
Nitrate+Nitrite as N	13	12	8.0
Phosphorus, Orthophosphate (As P)	3.8	3.2	17.1
Sulfate	950	930	2.1
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.013 J	<0.05	NC
Barium	0.075	0.074	1.3
Cadmium	<0.01	<0.01	NC
Calcium	2000	2100	4.9
Chromium	<0.03	<0.03	NC
Copper	<0.03	<0.03	NC
Iron	<0.1	<0.1	NC
Lead	<0.005	<0.005	NC
Magnesium	310	310	0.0
Manganese	5.5	5.6	1.8
Potassium	7.1	7	1.4
Selenium	<0.05	<0.05	NC
Silver	0.0096	0.059	**144**
Sodium	4700	4900	4.2
Uranium	0.14	0.14	0.0
Zinc	<0.05	<0.05	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0058 J	<0.05	NC
Barium	0.17	0.15	12.5
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.012	0.011	8.7
Iron	4.7	4.3	8.9
Lead	0.005	0.0088	**55.1**
Manganese	4.9	4.4	10.8
Mercury	0.000091 J	0.00011 J	NC
Selenium	0.023	<0.05	NC
Silver	0.029	0.028	3.5
Uranium	0.14	0.12	15.4
Zinc	0.018	0.021	15.4

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

55.1

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	0.37 J	0.61 J	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	0.15 J	0.24 J	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	0.49 J	0.7 J	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	0.54 J	0.67 J	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	0.14 J	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	410	390	5.0
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	0.1 J	NC
sec-Butylbenzene	0.12 J	0.15 J	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	0.16 J	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	0.55 J	0.8 J	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	0.22	0.26	16.7
Diesel Range Organics (DRO)	<1	<1	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	7.2 J	11 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	17	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.56	0.53	5.5
Chloride	100	96	4.1
Fluoride	<0.5	0.25 J	NC
Nitrate+Nitrite as N	0.18 J	0.19 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	280	240	15.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.001	<0.005	NC
Barium	0.04	0.041	2.5
Cadmium	<0.002	<0.002	NC
Calcium	74	76	2.7
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	16	16	0.0
Manganese	0.26	0.26	0.0
Potassium	0.93 J	0.93 J	NC
Selenium	<0.005	<0.005	NC
Silver	0.0025 J	0.002 J	NC
Sodium	280	270	3.6
Uranium	0.036	0.035	2.8
Zinc	0.007 J	0.0064 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0018	0.0019	5.4
Barium	0.15	0.12	22.2
Cadmium	<0.002	<0.002	NC
Chromium	0.002 J	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	4	2.8	**35.3**
Lead	0.0037	0.0026	**34.9**
Manganese	0.41	0.33	21.6
Mercury	0.000098 J	0.00011 J	NC
Selenium	0.0015	0.0018	18.2
Silver	0.0017 J	0.0018 J	NC
Uranium	0.035	0.035	0.0
Zinc	0.011	0.0077 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

34.9

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2	DUP 05	RPD %
	1802642-002	1802642-006	
	2/9/2018	2/9/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	0.5 J	0.36 J	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	0.15 J	0.1 J	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	5.5	5.4	1.8
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	1.4 J	1.3 J	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	8.1 J	9.9 J	NC
Benzene	27	26	3.8
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2 1802642-002 2/9/2018 Sample Result	DUP 05 1802642-006 2/9/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	33	30	9.5
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	3.3	3.1	6.2
Methyl tert-butyl ether (MTBE)	130	130	0.0
Methylene Chloride	<3	<3	NC
Naphthalene	4.4	4.2	4.7
n-Butylbenzene	0.58 J	0.53 J	NC
n-Propylbenzene	3	2.8	6.9
sec-Butylbenzene	1.1	1	9.5
Styrene	<1	<1	NC
tert-Butylbenzene	0.32 J	0.28 J	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	0.69 J	0.42 J	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	1.6	1.1 J	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	0.81	0.76	6.4
Diesel Range Organics (DRO)	1.3	1.4	7.4
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2 1802642-002 2/9/2018 Sample Result	DUP 05 1802642-006 2/9/2018 Field Duplicate	RPD %
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.2	0.0
Chloride	250	240	4.1
Fluoride	1.5	1.5	0.0
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	1.8 J	1.8 J	NC
Sulfate	6	6.3	4.9
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0047 J	0.0044 J	NC
Barium	2	1.9	5.1
Cadmium	<0.002	<0.002	NC
Calcium	76	77	1.3
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	1.6	1.6	0.0
Lead	<0.0005	<0.0005	NC
Magnesium	14	14	0.0
Manganese	1.1	0.96	13.6
Potassium	0.33 J	0.31 J	NC
Selenium	0.004 J	<0.005	NC
Silver	0.0021 J	<0.005	NC
Sodium	330	350	5.9
Uranium	0.00029 J	0.00033 J	NC
Zinc	0.0049 J	0.0086 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2 1802642-002 2/9/2018 Sample Result	DUP 05 1802642-006 2/9/2018 Field Duplicate	RPD %
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0056	0.0055	1.8
Barium	2.2	2.3	4.4
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	4.9	5.7	15.1
Lead	0.0015	0.002	**28.6**
Manganese	0.99	0.98	1.0
Mercury	0.000073 J	0.000083 J	NC
Selenium	0.0044	0.0041	7.1
Silver	0.0018 J	0.0018 J	NC
Uranium	0.0004 J	0.00042 J	NC
Zinc	0.0066 J	0.009 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

28.6

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	EAST LDU 1802819-001 2/12/2018 Sample Result	DUP06 1802819-003 2/12/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
1,2,4-Trimethylbenzene	25	25	0.0
1,3,5-Trimethylbenzene	110	110	0.0
Benzene	1900	1900	0.0
Ethylbenzene	290	280	3.5
Methyl tert-butyl ether (MTBE)	<10	5.6 J	NC
Toluene	47	46	2.2
Xylenes, Total	80	78	2.5
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	7.9	7.6	3.9
Diesel Range Organics (DRO)	4.5	4.9	8.5
Motor Oil Range Organics (MRO)	<5	<5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.001	<0.001	NC
Barium	0.21	0.21	0.0
Cadmium	<0.002	<0.002	NC
Chromium	0.048	0.049	2.1
Copper	<0.006	<0.006	NC
Iron	0.041	0.055	**29.2**
Lead	<0.0005	<0.0005	NC
Manganese	0.53	0.53	0.0
Selenium	<0.001	<0.001	NC
Silver	<0.005	0.0031 J	NC
Uranium	<0.0005	<0.0005	NC
Zinc	0.01	0.009 J	NC
Total Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.001	<0.001	NC
Barium	0.22	0.21	4.7
Cadmium	<0.002	<0.001	NC
Chromium	0.087	0.087	0.0
Copper	0.0043 J	<0.006	NC
Iron	0.97	0.98	1.0
Lead	0.00035 J	0.00034 J	NC
Manganese	0.54	0.53	1.9
Selenium	<0.001	<0.001	NC
Silver	0.0024 J	0.0023 J	NC
Uranium	<0.0005	<0.0005	NC
Zinc	0.027	0.027	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **29.2**

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<10	<10	NC
1,1,1-Trichloroethane	<10	<10	NC
1,1,2,2-Tetrachloroethane	<20	<20	NC
1,1,2-Trichloroethane	<10	<10	NC
1,1-Dichloroethane	8.4 J	8.3 J	NC
1,1-Dichloroethene	12	11	8.7
1,1-Dichloropropene	<10	<10	NC
1,2,3-Trichlorobenzene	<10	<10	NC
1,2,3-Trichloropropane	<20	<20	NC
1,2,4-Trichlorobenzene	<10	<10	NC
1,2,4-Trimethylbenzene	420	410	2.4
1,2-Dibromo-3-chloropropane	<20	<20	NC
1,2-Dibromoethane (EDB)	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,2-Dichloroethane (EDC)	<10	<10	NC
1,2-Dichloropropane	<10	<10	NC
1,3,5-Trimethylbenzene	68	67	1.5
1,3-Dichlorobenzene	<10	<10	NC
1,3-Dichloropropane	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	140	130	7.4
2,2-Dichloropropane	<20	<20	NC
2-Butanone	<100	<100	NC
2-Chlorotoluene	<10	<10	NC
2-Hexanone	<100	<100	NC
2-Methylnaphthalene	120	120	0.0
4-Chlorotoluene	<10	<10	NC
4-Isopropyltoluene	3.9 J	3.8 J	NC
4-Methyl-2-pentanone	<100	<100	NC
Acetone	<100	<100	NC
Benzene	900	890	1.1
Bromobenzene	<10	<10	NC
Bromodichloromethane	<10	<10	NC
Bromoform	<10	<10	NC
Bromomethane	<30	<30	NC
Carbon disulfide	<100	<100	NC
Carbon Tetrachloride	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<10	<10	NC
Chloroethane	<20	<20	NC
Chloroform	<10	<10	NC
Chloromethane	<30	<30	NC
cis-1,2-DCE	11	11	0.0
cis-1,3-Dichloropropene	<10	<10	NC
Dibromochloromethane	<10	<10	NC
Dibromomethane	<10	<10	NC
Dichlorodifluoromethane	<10	<10	NC
Ethylbenzene	600	620	3.3
Hexachlorobutadiene	<10	<10	NC
Isopropylbenzene	23	23	0.0
Methyl tert-butyl ether (MTBE)	2000	2000	0.0
Methylene Chloride	<30	<30	NC
Naphthalene	260	250	3.9
n-Butylbenzene	9.3 J	8.3 J	NC
n-Propylbenzene	48	48	0.0
sec-Butylbenzene	2.8 J	3.4 J	NC
Styrene	<10	<10	NC
tert-Butylbenzene	<10	<10	NC
Tetrachloroethene (PCE)	<10	<10	NC
Toluene	14	14	0.0
trans-1,2-DCE	<10	<10	NC
trans-1,3-Dichloropropene	<10	<10	NC
Trichloroethene (TCE)	<10	<10	NC
Trichlorofluoromethane	<10	<10	NC
Vinyl chloride	<10	<10	NC
Xylenes, Total	710	730	2.8
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	9.6	9.9	3.1
Diesel Range Organics (DRO)	5	5.1	2.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	150	130	14.3
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	3.6 J	4.8 J	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	160	150	6.5
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	5.8 J	5.9 J	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	15	14	6.9
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	6.9 J	6.9 J	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	220	190	14.6
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	4.7 J	4.9 J	NC
Phenol	6.6 J	6.3 J	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	2.3	2.3	0.0
Chloride	220	200	9.5
Fluoride	0.93	0.92	1.1
Phosphorus, Orthophosphate (As P)	2.2 J	2.2 J	NC
Sulfate	8.6	8.3	3.6
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.02	0.01	NC
Barium	2.8	2.8	0.0
Cadmium	<0.002	<0.002	NC
Calcium	120	120	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	1.9	1.9	0.0
Lead	<0.0005	<0.0005	NC
Magnesium	26	28	7.4
Manganese	1.5	1.5	0.0
Potassium	0.63 J	0.7 J	NC
Selenium	<0.02	<0.02	NC
Silver	0.0024 J	0.0024 J	NC
Sodium	340	340	0.0
Uranium	0.0044	0.0044	0.0
Zinc	0.0082 J	0.0083 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP07	RPD %
	1802938-001	1802938-004	
	2/14/2018	2/14/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0069	0.0057	19.0
Barium	2.8	2.8	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	5.2	4.8	8.0
Lead	0.0007	0.0007	0.0
Manganese	1.5	1.5	0.0
Mercury	<0.0002	<0.0002	NC
Selenium	0.0083	0.0085	2.4
Silver	0.0021 J	0.002 J	NC
Uranium	0.0042	0.0041	2.4
Zinc	<0.01	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<10	<20	NC
1,1,1-Trichloroethane	<10	<20	NC
1,1,2,2-Tetrachloroethane	<20	<40	NC
1,1,2-Trichloroethane	<10	<20	NC
1,1-Dichloroethane	6.2 J	9.3 J	NC
1,1-Dichloroethene	<10	<20	NC
1,1-Dichloropropene	<10	<20	NC
1,2,3-Trichlorobenzene	<10	<20	NC
1,2,3-Trichloropropane	<20	<40	NC
1,2,4-Trichlorobenzene	<10	<20	NC
1,2,4-Trimethylbenzene	26	25	3.9
1,2-Dibromo-3-chloropropane	<20	<40	NC
1,2-Dibromoethane (EDB)	<10	<20	NC
1,2-Dichlorobenzene	<10	<20	NC
1,2-Dichloroethane (EDC)	<10	<20	NC
1,2-Dichloropropane	<10	<20	NC
1,3,5-Trimethylbenzene	41	42	2.4
1,3-Dichlorobenzene	<10	<20	NC
1,3-Dichloropropane	<10	<20	NC
1,4-Dichlorobenzene	<10	<20	NC
1-Methylnaphthalene	6.5 J	12 J	NC
2,2-Dichloropropane	<20	<40	NC
2-Butanone	<100	<200	NC
2-Chlorotoluene	<10	<20	NC
2-Hexanone	<100	<200	NC
2-Methylnaphthalene	<40	<80	NC
4-Chlorotoluene	<10	<20	NC
4-Isopropyltoluene	<10	<20	NC
4-Methyl-2-pentanone	<100	<200	NC
Acetone	50 J	23 J	NC
Benzene	1800	2000	10.5
Bromobenzene	<10	<20	NC
Bromodichloromethane	<10	<20	NC
Bromoform	<10	<20	NC
Bromomethane	<30	<60	NC
Carbon disulfide	<100	<200	NC
Carbon Tetrachloride	<10	<20	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<10	<20	NC
Chloroethane	<20	<40	NC
Chloroform	<10	<20	NC
Chloromethane	<30	<60	NC
cis-1,2-DCE	<10	<20	NC
cis-1,3-Dichloropropene	<10	<20	NC
Dibromochloromethane	<10	<20	NC
Dibromomethane	<10	<20	NC
Dichlorodifluoromethane	<10	<20	NC
Ethylbenzene	15	15 J	NC
Hexachlorobutadiene	<10	<20	NC
Isopropylbenzene	<10	<20	NC
Methyl tert-butyl ether (MTBE)	40	38	5.1
Methylene Chloride	<30	<60	NC
Naphthalene	8.1 J	11 J	NC
n-Butylbenzene	1.9 J	2.8 J	NC
n-Propylbenzene	<10	<20	NC
sec-Butylbenzene	<10	<20	NC
Styrene	<10	<20	NC
tert-Butylbenzene	<10	<20	NC
Tetrachloroethene (PCE)	<10	<20	NC
Toluene	24	23	4.3
trans-1,2-DCE	<10	<20	NC
trans-1,3-Dichloropropene	<10	<20	NC
Trichloroethene (TCE)	<10	<20	NC
Trichlorofluoromethane	<10	<20	NC
Vinyl chloride	5.8 J	8.5 J	NC
Xylenes, Total	230	220	4.4
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	8.4	7.4	12.7
Diesel Range Organics (DRO)	2.4	2.5	4.1
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	3.6 J	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	6.3 J	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	7.7 J	8.4 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	5.6 J	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	3.4 J	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	62	21	**98.8**
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	<0.5	<0.5	NC
Chloride	760	800	5.1
Fluoride	4.5	4.8	6.5
Nitrogen, Nitrate (As N)	0.13 J	0.13 J	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	57	59	3.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0027 J	0.0024	NC
Barium	0.67	0.66	1.5
Cadmium	<0.002	<0.002	NC
Calcium	64	63	1.6
Chromium	<0.006	<0.006	NC
Copper	0.019	0.018	5.4
Iron	0.095	0.095	0.0
Lead	<0.0025	0.00036 J	NC
Magnesium	6.1	5.9	3.3
Manganese	0.37	0.37	0.0
Potassium	17	17	0.0
Selenium	<0.005	0.0023	NC
Silver	0.002 J	<0.005	NC
Sodium	540	570	5.4
Uranium	0.002 J	0.0022	NC
Zinc	0.072	0.07	2.8

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0071	0.0061	15.2
Barium	1.6	1.5	6.5
Cadmium	<0.002	<0.002	NC
Chromium	0.023	0.02	14.0
Copper	0.078	0.073	6.6
Iron	18	15	18.2
Lead	0.025	0.024	4.1
Manganese	0.8	0.7	13.3
Mercury	0.00044	0.00046	4.4
Selenium	0.0025	0.0028	11.3
Silver	<0.005	<0.005	NC
Uranium	0.006	0.0056	6.9
Zinc	0.29	0.25	14.8

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	0.47 J	0.48 J	NC
1,1-Dichloroethene	1.4	1.7	19.4
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	0.89 J	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	0.66 J	0.67 J	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	0.16 J	0.17 J	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	3.1	3.3	6.2
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	0.012 J	<0.05	NC
Diesel Range Organics (DRO)	<1	<1	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	8.9 J	5.8 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.3	8.0
Chloride	230	250	8.3
Fluoride	0.45 J	0.45 J	NC
Nitrogen, Nitrate (As N)	8.4	8.5	1.2
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	230	230	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0026 J	0.0025 J	NC
Barium	0.049	0.049	0.0
Cadmium	<0.002	<0.002	NC
Calcium	51	51	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	13	13	0.0
Manganese	0.0025	0.002	22.2
Potassium	1.4	1.4	0.0
Selenium	0.0067	0.0067	0.0
Silver	<0.005	<0.005	NC
Sodium	400	390	2.5
Uranium	0.035	0.034	2.9
Zinc	0.0083 J	0.0089 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0044	0.002	**75.0**
Barium	0.083	0.058	**35.5**
Cadmium	<0.002	0.00072 J	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	2.2	0.98	**76.7**
Lead	0.0023	0.0011	**70.6**
Manganese	0.045	0.02	**76.9**
Mercury	0.00021	0.00045	**72.7**
Selenium	0.0053	<0.005	NC
Silver	<0.005	<0.005	NC
Uranium	0.038	0.039	2.6
Zinc	0.018	0.0095 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

72.7

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2	DUP10	RPD %
	1802C47-002	1802C47-004	
	2/20/2018	2/20/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<100	<100	NC
1,1,1-Trichloroethane	<100	<100	NC
1,1,2,2-Tetrachloroethane	<200	<200	NC
1,1,2-Trichloroethane	<100	<100	NC
1,1-Dichloroethane	<100	<100	NC
1,1-Dichloroethene	<100	<100	NC
1,1-Dichloropropene	<100	<100	NC
1,2,3-Trichlorobenzene	<100	<100	NC
1,2,3-Trichloropropane	<200	<200	NC
1,2,4-Trichlorobenzene	<100	<100	NC
1,2,4-Trimethylbenzene	320	310	3.2
1,2-Dibromo-3-chloropropane	<200	<200	NC
1,2-Dibromoethane (EDB)	<100	<100	NC
1,2-Dichlorobenzene	<100	<100	NC
1,2-Dichloroethane (EDC)	<100	<100	NC
1,2-Dichloropropane	<100	<100	NC
1,3,5-Trimethylbenzene	38 J	38 J	NC
1,3-Dichlorobenzene	<100	<100	NC
1,3-Dichloropropane	<100	<100	NC
1,4-Dichlorobenzene	<100	<100	NC
1-Methylnaphthalene	76 J	79 J	NC
2,2-Dichloropropane	<200	<200	NC
2-Butanone	<1000	<1000	NC
2-Chlorotoluene	<100	<100	NC
2-Hexanone	<1000	<1000	NC
2-Methylnaphthalene	53 J	53 J	NC
4-Chlorotoluene	<100	<100	NC
4-Isopropyltoluene	<100	<100	NC
4-Methyl-2-pentanone	<1000	<1000	NC
Acetone	<1000 J	110 J	NC
Benzene	42000	43000	2.4
Bromobenzene	<100	<100	NC
Bromodichloromethane	<100	<100	NC
Bromoform	<100	<100	NC
Bromomethane	<300	<300	NC
Carbon disulfide	<1000	<1000	NC
Carbon Tetrachloride	<100	<100	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2 1802C47-002 2/20/2018 Sample Result	DUP10 1802C47-004 2/20/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<100	<100	NC
Chloroethane	<200	<200	NC
Chloroform	<100	<100	NC
Chloromethane	<300	<300	NC
cis-1,2-DCE	<100	<100	NC
cis-1,3-Dichloropropene	<100	<100	NC
Dibromochloromethane	<100	<100	NC
Dibromomethane	<100	<100	NC
Dichlorodifluoromethane	<100	<100	NC
Ethylbenzene	1500	1500	0.0
Hexachlorobutadiene	<100	<100	NC
Isopropylbenzene	19 J	19 J	NC
Methyl tert-butyl ether (MTBE)	1200	1300	8.0
Methylene Chloride	<300	<300	NC
Naphthalene	140 J	140 J	NC
n-Butylbenzene	14 J	15 J	NC
n-Propylbenzene	59 J	57 J	NC
sec-Butylbenzene	<100	<100	NC
Styrene	<100	<100	NC
tert-Butylbenzene	<100	<100	NC
Tetrachloroethene (PCE)	<100	<100	NC
Toluene	3700	3800	2.7
trans-1,2-DCE	<100	<100	NC
trans-1,3-Dichloropropene	<100	<100	NC
Trichloroethene (TCE)	<100	<100	NC
Trichlorofluoromethane	<100	<100	NC
Vinyl chloride	<100	<100	NC
Xylenes, Total	3800	4000	5.1
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	8	7.9	1.3
Gasoline Range Organics (GRO)	110	120	8.7
Motor Oil Range Organics (MRO)	<5	<5	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	3.3 J	2.9 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	9.2	9.1	1.1
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<2	<2	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.13	0.14	7.4
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	14 J	5.6 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	2.7	2.6	3.8
Chloride	1900	1800	5.4
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<2	<2	NC
Phosphorus, Orthophosphate (As P)	<10	<10	NC
Sulfate	2700	2500	7.7
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.2	<0.2	NC
Barium	0.0084 J	0.0078 J	NC
Cadmium	<0.01	<0.01	NC
Calcium	190	200	5.1
Chromium	<0.006	<0.006	NC
Copper	<0.03	<0.03	NC
Iron	<0.1	<0.1	NC
Lead	<0.0025	<0.0025	NC
Magnesium	66	67	1.5
Manganese	0.048	0.049	2.1
Potassium	0.96 J	0.98 J	NC
Selenium	<0.2	<0.2	NC
Silver	<0.025	<0.025	NC
Sodium	2500	2100	17.4
Uranium	0.16	0.15	6.5
Zinc	<0.01	0.0063 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	DUP11	RPD %
	1802D26-002	1802D26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.012 J	0.01 J	NC
Barium	0.16	0.24	**40.0**
Cadmium	<0.002	<0.002	NC
Chromium	<0.03	<0.03	NC
Copper	0.0073	0.0081	10.4
Iron	4.9	7.9	**46.9**
Lead	0.0039 J	0.0065	**50.0**
Manganese	0.19	0.29	**41.7**
Mercury	0.000042 J	<0.0002	NC
Selenium	<0.02	<0.02	NC
Silver	<0.025	0.0043 J	NC
Uranium	0.16	0.15	6.5
Zinc	<0.05	<0.05	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

41.7

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP 12	RPD %
	1803047-001	1803047-003	
	2/27/2018	2/27/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP 12	RPD %
	1803047-001	1803047-003	
	2/27/2018	2/27/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	1.1	1.1	0.0
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Diesel Range Organics (DRO)	<1	<1	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP 12	RPD %
	1803047-001	1803047-003	
	2/27/2018	2/27/2018	
	Sample Result	Field Duplicate	
E504.1			
1,2-Dibromoethane	<0.0094	<0.0094	NC
General Chemistry - E300 (mg/L)			
Bromide	0.4 J	0.4 J	NC
Chloride	94	97	3.1
Fluoride	<0.5	<0.5	NC
Nitrate+Nitrite as N	0.36 J	1.3	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	170	170	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.033	0.033	0.0
Cadmium	<0.002	<0.002	NC
Calcium	2.1	2.1	0.0
Chromium	0.0019 J	0.0016 J	NC
Copper	<0.006	<0.006	NC
Iron	0.022	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	0.25 J	<1	NC
Manganese	0.003	0.0025	18.2
Potassium	0.79 J	0.73 J	NC
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Sodium	340	320	6.1
Uranium	0.034	0.034	6.5
Zinc	0.0062 J	0.013	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP 12	RPD %
	1803047-001	1803047-003	
	2/27/2018	2/27/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	0.0021 J	NC
Barium	0.038	0.037	2.7
Cadmium	0.00091 J	0.00089 J	NC
Chromium	0.0018 J	0.0021 J	NC
Copper	<0.006	<0.006	NC
Iron	0.11	0.12	8.7
Lead	<0.0005	<0.0005	NC
Manganese	0.0077	0.0075	2.6
Mercury	0.000048 J	0.000057 J	NC
Selenium	0.0025	0.0026	3.9
Silver	<0.005	<0.005	NC
Uranium	0.037	0.036	2.7
Zinc	0.0044 J	0.0037 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP13	RPD %
	1803089-001	1803089-003	
	2/28/2018	2/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<5	<5	NC
1,1,1-Trichloroethane	<5	<5	NC
1,1,2,2-Tetrachloroethane	<10	<10	NC
1,1,2-Trichloroethane	<5	<5	NC
1,1-Dichloroethane	<5	<5	NC
1,1-Dichloroethene	<5	<5	NC
1,1-Dichloropropene	<5	<5	NC
1,2,3-Trichlorobenzene	<5	<5	NC
1,2,3-Trichloropropane	<10	<10	NC
1,2,4-Trichlorobenzene	<5	<5	NC
1,2,4-Trimethylbenzene	<5	<5	NC
1,2-Dibromo-3-chloropropane	<10	<10	NC
1,2-Dibromoethane (EDB)	<5	<5	NC
1,2-Dichlorobenzene	<5	<5	NC
1,2-Dichloroethane (EDC)	<5	<5	NC
1,2-Dichloropropane	<5	<5	NC
1,3,5-Trimethylbenzene	<5	<5	NC
1,3-Dichlorobenzene	<5	<5	NC
1,3-Dichloropropane	<5	<5	NC
1,4-Dichlorobenzene	<5	<5	NC
1-Methylnaphthalene	<20	<20	NC
2,2-Dichloropropane	<10	<10	NC
2-Butanone	<50	<50	NC
2-Chlorotoluene	<5	<5	NC
2-Hexanone	<50	<50	NC
2-Methylnaphthalene	<20	<20	NC
4-Chlorotoluene	<5	<5	NC
4-Isopropyltoluene	<5	<5	NC
4-Methyl-2-pentanone	<50	<50	NC
Acetone	4.9 J	4.3 J	NC
Benzene	6.3	5.9	6.6
Bromobenzene	<5	<5	NC
Bromodichloromethane	<5	<5	NC
Bromoform	<5	<5	NC
Bromomethane	<15	<15	NC
Carbon disulfide	<50	<50	NC
Carbon Tetrachloride	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP13	RPD %
	1803089-001	1803089-003	
	2/28/2018	2/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<5	<5	NC
Chloroethane	<10	<10	NC
Chloroform	<5	<5	NC
Chloromethane	<15	<15	NC
cis-1,2-DCE	<5	<5	NC
cis-1,3-Dichloropropene	<5	<5	NC
Dibromochloromethane	<5	<5	NC
Dibromomethane	<5	<5	NC
Dichlorodifluoromethane	<5	<5	NC
Ethylbenzene	<5	<5	NC
Hexachlorobutadiene	<5	<5	NC
Isopropylbenzene	<5	<5	NC
Methyl tert-butyl ether (MTBE)	2900	2700	7.1
Methylene Chloride	<15	<15	NC
Naphthalene	<10	<10	NC
n-Butylbenzene	<15	<15	NC
n-Propylbenzene	<5	<5	NC
sec-Butylbenzene	1.1 J	1 J	NC
Styrene	<5	<5	NC
tert-Butylbenzene	<5	<5	NC
Tetrachloroethene (PCE)	<5	<5	NC
Toluene	<5	<5	NC
trans-1,2-DCE	<5	<5	NC
trans-1,3-Dichloropropene	<5	<5	NC
Trichloroethene (TCE)	<5	<5	NC
Trichlorofluoromethane	<5	<5	NC
Vinyl chloride	<5	<5	NC
Xylenes, Total	<7.5	<7.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	2.9	2.8	3.5
Diesel Range Organics (DRO)	0.67 J	0.63 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP13	RPD %
	1803089-001	1803089-003	
	2/28/2018	2/28/2018	
	Sample Result	Field Duplicate	
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0094	<0.0094	NC
General Chemistry - E300 (mg/L)			
Bromide	0.4 J	0.4 J	NC
Chloride	94	97	3.1
Fluoride	<0.5	<0.5	NC
Nitrate+Nitrite as N	0.36 J	1.3	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	170	170	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.12	0.11	8.7
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	0.004 J	NC
Iron	0.064	0.066	3.1
Lead	0.0003 J	0.00031 J	NC
Manganese	0.04	0.04	0.0
Selenium	<0.005	<0.005	NC
Silver	<0.005	0.0024 J	NC
Uranium	0.035	0.034	2.9
Zinc	0.0066 J	0.0079 J	NC

Table I-3
Field Duplicate Summary - First Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP13	RPD %
	1803089-001	1803089-003	
	2/28/2018	2/28/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0029 J	<0.005	NC
Barium	0.12	0.12	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	0.0045 J	NC
Iron	0.071	0.07	1.4
Lead	<0.0025	<0.0025	NC
Manganese	0.042	0.041	2.4
Mercury	<0.0002	<0.0002	NC
Selenium	<0.005	<0.005	NC
Silver	0.0024 J	0.0026 J	NC
Uranium	0.04	0.039	2.5
Zinc	<0.01	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	22	23	4.4
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	43	47	8.9
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	110	100	9.5
2,2-Dichloropropane	<2	<2	NC
2-Butanone	100	41	**83.7**
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	120	120	0.0
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	4.6	4.9	6.3
4-Methyl-2-pentanone	<10	<10	NC
Acetone	330	120	**93.3**
Benzene	8900	9100	2.2
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	1400	1300	7.4
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	58	60	3.4
Methyl tert-butyl ether (MTBE)	37	35	5.6
Methylene Chloride	<3	<3	NC
Naphthalene	400	390	2.5
n-Butylbenzene	24	25	4.1
n-Propylbenzene	200	190	5.1
sec-Butylbenzene	10	11	9.5
Styrene	<1	<1	NC
tert-Butylbenzene	0.25 J	0.26 J	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	120	110	8.7
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	680	640	6.1
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	29	28	3.5
Diesel Range Organics (DRO)	5.6	5.9	5.2
Motor Oil Range Organics (MRO)	<5	<5	NC

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	57	76	**28.6**
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	13	18	**32.3**
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	69	85	20.8
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	41	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	7.2 J	7.5 J	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	190	220	14.6
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	17	23	**30.0**
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.51	0.52	1.9
Chloride	94	99	5.2
Fluoride	<0.5	<0.5	NC
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	<2.5	<2.5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.012	0.012	0.0
Barium	4	4	0.0
Cadmium	<0.002	<0.002	NC
Calcium	82	83	1.2
Chromium	<0.006	<0.006	NC
Copper	0.0038 J	<0.006	NC
Iron	5.5	5.5	0.0
Lead	<0.0005	<0.0005	NC
Magnesium	16	16	0.0
Manganese	0.92	0.93	1.1
Potassium	0.6 J	0.63 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	300	310	3.3
Uranium	0.00013 J	0.00013 J	NC
Zinc	0.011	0.0056 J	NC

Table H-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.014	0.014	0.0
Barium	4	4.1	2.5
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	5.8	5.8	0.0
Lead	0.00045 J	0.00042 J	NC
Manganese	1	0.93	7.3
Mercury	<0.001	<0.001	NC
Selenium	<0.005	<0.005	NC
Silver	0.00027 J	0.0002 J	NC
Uranium	<0.01	<0.01	NC
Zinc	<0.05	<0.05	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **30.0**

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2	DUP02	RPD %
	1805106-005	1805106-010	
	4/30/2018	4/30/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	0.52 J	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	0.84 J	0.88 J	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	0.2 J	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	11	13	16.7
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	1.7 J	2.4 J	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	9.7 J	17	NC
Benzene	32	38	17.1
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2 1805106-005 4/30/2018 Sample Result	DUP02 1805106-010 4/30/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	35	46	**27.2**
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	3.7	4.5	19.5
Methyl tert-butyl ether (MTBE)	99	110	10.5
Methylene Chloride	<3	<3	NC
Naphthalene	7.8	8.4	7.4
n-Butylbenzene	0.59 J	0.79 J	NC
n-Propylbenzene	3.7	4.9	**27.9**
sec-Butylbenzene	1.2	1.6	**28.6**
Styrene	<1	<1	NC
tert-Butylbenzene	0.25 J	0.36 J	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	2.3	2.8	19.6
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	0.61 J	3	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	0.59	0.61	3.3
Diesel Range Organics (DRO)	1.9	1.8	5.4
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2 1805106-005 4/30/2018 Sample Result	DUP02 1805106-010 4/30/2018 Field Duplicate	RPD %
General Chemistry - E300 (mg/L)			
Bromide	1	1	0.0
Chloride	220	210	4.7
Fluoride	1.6	1.6	0.0
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	3.6	3.9	8.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0045	0.0043	4.5
Barium	1.6	1.6	0.0
Cadmium	<0.002	<0.002	NC
Calcium	66	66	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	1.8	1.7	5.7
Lead	<0.0005	<0.0005	NC
Magnesium	13	12	8.0
Manganese	0.91	0.92	1.1
Potassium	0.27 J	0.25 J	NC
Selenium	0.0049	0.0016	**101.5**
Silver	<0.005	<0.005	NC
Sodium	360	340	5.7
Uranium	0.00016 J	0.00016 J	NC
Zinc	0.0054 J	0.0056 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2	DUP02	RPD %
	1805106-005	1805106-010	
	4/30/2018	4/30/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0047	0.0046	2.2
Barium	2.2	1.8	20.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	3.7	3.1	17.6
Lead	0.0012	0.00078	**42.4**
Manganese	0.94	0.95	1.1
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0013 J	<0.005	NC
Uranium	0.00029 J	0.00023 J	NC
Zinc	0.0064 J	0.0034 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **42.4**

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	2.7 J	5 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	7.3	7.1	2.8
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	0.66 J	0.64 J	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.9	0.91	3.8
Chloride	160	180	5.4
Fluoride	0.68	0.86	NC
Phosphorus, Orthophosphate (As P)	0.78 J	<2.5	NC
Sulfate	460	460	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0015	0.0015	0.0
Barium	0.021	0.022	4.7
Cadmium	<0.002	<0.002	NC
Calcium	63	62	1.6
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.03	0.025	18.2
Lead	<0.0005	<0.0005	NC
Magnesium	8.8	8.9	1.1
Manganese	0.38	0.38	0.0
Potassium	0.25 J	0.25 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	490	480	2.1
Uranium	0.0079	0.0083	4.9
Zinc	0.0048 J	0.0058 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP03	RPD %
	1805201-004	1805201-009	
	5/1/2018	5/1/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0021 J	0.0023 J	NC
Barium	0.15	0.15	0.0
Cadmium	<0.002	<0.002	NC
Chromium	0.0031 J	0.0042 J	NC
Copper	0.0052 J	0.0044 J	NC
Iron	3.7	4.3	15.0
Lead	0.0017	0.002	16.2
Manganese	0.55	0.55	0.0
Mercury	0.00006 J	0.00008 J	NC
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Uranium	0.0084	0.0086	2.4
Zinc	0.01	0.0097 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<100	<100	NC
1,1,1-Trichloroethane	<100	<100	NC
1,1,2,2-Tetrachloroethane	<200	<200	NC
1,1,2-Trichloroethane	<100	<100	NC
1,1-Dichloroethane	75 J	80 J	NC
1,1-Dichloroethene	<100	<100	NC
1,1-Dichloropropene	<100	<100	NC
1,2,3-Trichlorobenzene	<100	<100	NC
1,2,3-Trichloropropane	<200	<200	NC
1,2,4-Trichlorobenzene	<100	<100	NC
1,2,4-Trimethylbenzene	790	790	0.0
1,2-Dibromo-3-chloropropane	<200	<200	NC
1,2-Dibromoethane (EDB)	<100	<100	NC
1,2-Dichlorobenzene	<100	<100	NC
1,2-Dichloroethane (EDC)	<100	<100	NC
1,2-Dichloropropane	<100	<100	NC
1,3,5-Trimethylbenzene	220	220	0.0
1,3-Dichlorobenzene	<100	<100	NC
1,3-Dichloropropane	<100	<100	NC
1,4-Dichlorobenzene	<100	<100	NC
1-Methylnaphthalene	50 J	72 J	9.5
2,2-Dichloropropane	<200	<200	NC
2-Butanone	<1000	<1000	NC
2-Chlorotoluene	<100	<100	NC
2-Hexanone	<1000	<1000	NC
2-Methylnaphthalene	48 J	52 J	NC
4-Chlorotoluene	<100	<100	NC
4-Isopropyltoluene	16 J	17 J	NC
4-Methyl-2-pentanone	<1000	<1000	NC
Acetone	<1000	<1000	NC
Benzene	16000	16000	0.0
Bromobenzene	<100	<100	NC
Bromodichloromethane	<100	<100	NC
Bromoform	<100	<100	NC
Bromomethane	<300	<300	NC
Carbon disulfide	<1000	<1000	NC
Carbon Tetrachloride	<100	<100	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<100	<100	NC
Chloroethane	<200	<200	NC
Chloroform	<100	<100	NC
Chloromethane	<300	<300	NC
cis-1,2-DCE	<100	<100	NC
cis-1,3-Dichloropropene	<100	<100	NC
Dibromochloromethane	<100	<100	NC
Dibromomethane	<100	<100	NC
Dichlorodifluoromethane	<100	<100	NC
Ethylbenzene	2400	2400	0.0
Hexachlorobutadiene	<100	<100	NC
Isopropylbenzene	120	120	0.0
Methyl tert-butyl ether (MTBE)	180	190	5.4
Methylene Chloride	<300	<300	NC
Naphthalene	110 J	130 J	NC
n-Butylbenzene	21 J	21 J	NC
n-Propylbenzene	170	170	0.0
sec-Butylbenzene	20 J	22 J	NC
Styrene	<100	<100	NC
tert-Butylbenzene	<100	<100	NC
Tetrachloroethene (PCE)	<100	<100	NC
Toluene	11000	10000	9.5
trans-1,2-DCE	<100	<100	NC
trans-1,3-Dichloropropene	<100	<100	NC
Trichloroethene (TCE)	<100	<100	NC
Trichlorofluoromethane	<100	<100	NC
Vinyl chloride	<100	<100	NC
Xylenes, Total	7900	7800	1.3
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	4	4.3	7.2
Gasoline Range Organics (GRO)	97	82	16.8
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<50	<10	NC
1,2-Dichlorobenzene	<50	<10	NC
1,3-Dichlorobenzene	<50	<10	NC
1,4-Dichlorobenzene	<50	<10	NC
1-Methylnaphthalene	<50	18	NC
2,4,5-Trichlorophenol	<50	<10	NC
2,4,6-Trichlorophenol	<50	<10	NC
2,4-Dichlorophenol	<100	<20	NC
2,4-Dimethylphenol	70	70	0.0
2,4-Dinitrophenol	<100	<20	NC
2,4-Dinitrotoluene	<50	<10	NC
2,6-Dinitrotoluene	<50	<10	NC
2-Chloronaphthalene	<50	<10	NC
2-Chlorophenol	<50	<10	NC
2-Methylnaphthalene	<50	18	NC
2-Methylphenol	350	300	15.4
2-Nitroaniline	<50	<10	NC
2-Nitrophenol	<50	<10	NC
3,3´-Dichlorobenzidine	<50	<10	NC
3+4-Methylphenol	230	200	14.0
3-Nitroaniline	<50	<10	NC
4,6-Dinitro-2-methylphenol	<100	<20	NC
4-Bromophenyl phenyl ether	<50	<10	NC
4-Chloro-3-methylphenol	<50	<10	NC
4-Chloroaniline	<50	<10	NC
4-Chlorophenyl phenyl ether	<50	<10	NC
4-Nitroaniline	<50	<10	NC
4-Nitrophenol	<50	<10	NC
Acenaphthene	<50	<10	NC
Acenaphthylene	<50	<10	NC
Aniline	<50	<10	NC
Anthracene	<50	<10	NC
Azobenzene	<50	<10	NC
Benz(a)anthracene	<50	<10	NC
Benzo(a)pyrene	<50	<10	NC
Benzo(b)fluoranthene	<50	<10	NC
Benzo(g,h,i)perylene	<50	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<50	<10	NC
Benzoic acid	130	<20	NC
Benzyl alcohol	<50	6.8 J	NC
Bis(2-chloroethoxy)methane	<50	<10	NC
Bis(2-chloroethyl)ether	<50	<10	NC
Bis(2-chloroisopropyl)ether	<50	<10	NC
Bis(2-ethylhexyl)phthalate	<50	<10	NC
Butyl benzyl phthalate	<50	<10	NC
Carbazole	<50	<10	NC
Chrysene	<50	<10	NC
Dibenz(a,h)anthracene	<50	<10	NC
Dibenzofuran	<50	<10	NC
Diethyl phthalate	<50	<10	NC
Dimethyl phthalate	<50	<10	NC
Di-n-butyl phthalate	<50	<10	NC
Di-n-octyl phthalate	<50	<10	NC
Fluoranthene	<50	<10	NC
Fluorene	<50	<10	NC
Hexachlorobenzene	<50	<10	NC
Hexachlorobutadiene	<50	<10	NC
Hexachlorocyclopentadiene	<50	<10	NC
Hexachloroethane	<50	<10	NC
Indeno(1,2,3-cd)pyrene	<50	<10	NC
Isophorone	<50	<10	NC
Naphthalene	44 J	56	NC
Nitrobenzene	<50	<10	NC
N-Nitrosodimethylamine	<50	<10	NC
N-Nitrosodi-n-propylamine	<50	<10	NC
N-Nitrosodiphenylamine	<50	<10	NC
Pentachlorophenol	<100	<20	NC
Phenanthrene	<50	<10	NC
Phenol	660	460	35.7
Pyrene	<50	<10	NC
Pyridine	<50	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.52	0.58	10.9
Chloride	7200	6800	5.7
Fluoride	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	1.3 J	<2.5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.01	0.011	9.5
Barium	31	34	9.2
Cadmium	<0.002	<0.002	NC
Calcium	1200	1300	8.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	46	50	8.3
Lead	<0.005	<0.005	NC
Magnesium	370	360	2.7
Manganese	17	18	5.7
Potassium	3.6	3.6	0.0
Selenium	<0.01	<0.01	NC
Silver	0.008	0.008	0.0
Sodium	2600	2500	3.3
Uranium	<0.005	<0.005	NC
Zinc	0.0034 J	0.0027 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.016	0.016	0.0
Barium	33	34	3.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.0075	0.0061	20.6
Iron	53	53	0.0
Lead	0.0044 J	0.0035 J	NC
Manganese	18	20	10.5
Mercury	<0.0002	<0.0002	NC
Selenium	<0.01	<0.01	NC
Silver	0.0077	0.0081	5.1
Uranium	<0.005	<0.005	NC
Zinc	0.01	0.0047 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **35.7**

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	0.3 J	0.29 J	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	0.78 J	0.81 J	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	0.0
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.97	0.96	1.0
Chloride	290	290	0.0
Fluoride	0.65	0.62	4.7
Nitrogen, Nitrate (As N)	0.4	0.52	**26.1**
Nitrogen, Nitrite (As N)	<0.1	<0.1	NC
Phosphorus, Orthophosphate (As P)	<0.5	<0.5	NC
Sulfate	320	320	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.005	0.0014	NC
Barium	0.034	0.036	5.7
Cadmium	<0.002	<0.002	NC
Calcium	160	150	6.5
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	0.11	NC
Lead	<0.0025	<0.0005	NC
Magnesium	30	30	0.0
Manganese	2.5	2.5	0.0
Potassium	0.63 J	0.72 J	NC
Selenium	<0.005	<0.001	NC
Silver	0.0028 J	0.0028 J	NC
Sodium	310	300	3.3
Uranium	0.026	0.026	0.0
Zinc	0.0071 J	0.0093 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0025	0.0023	8.3
Barium	0.082	0.078	5.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	1.6	1.6	0.0
Lead	0.0015	0.0014	6.9
Manganese	2.4	2.3	4.3
Mercury	0.000045 J	0.00005 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.002 J	0.0024 J	NC
Uranium	0.027	0.027	0.0
Zinc	0.0058 J	0.0072 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

26.1

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	1.4	1.5	6.9
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	0.87 J	0.91 J	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	2.7	2.8	3.6
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	11 J	13 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.2	0.0
Chloride	230	240	4.3
Fluoride	0.31	0.31	0.0
Nitrogen, Nitrate (As N)	8.1	8.6	6.0
Nitrogen, Nitrite (As N)	<0.1	<0.1	NC
Phosphorus, Orthophosphate (As P)	<0.5	<0.5	NC
Sulfate	250	260	3.9
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0011	0.0012	8.7
Barium	0.05	0.05	0.0
Cadmium	<0.002	<0.002	NC
Calcium	64	65	1.6
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	14	14	0.0
Manganese	0.00041 J	0.00086 J	NC
Potassium	1.2	1.2	0.0
Selenium	0.0025	0.0028	11.3
Silver	<0.005	<0.005	NC
Sodium	390	380	2.6
Uranium	0.036	0.036	0.0
Zinc	0.0061 J	0.0064 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0015	0.0014	6.9
Barium	0.049	0.055	11.5
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.34	0.06	**140.0**
Lead	0.00033 J	<0.0005	NC
Manganese	0.0078	0.0017 J	NC
Mercury	0.00015 J	0.00037	NC
Selenium	0.0027	0.0026	3.8
Silver	<0.005	<0.005	NC
Uranium	0.037	0.038	2.7
Zinc	0.0068 J	0.0042 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **140.0**

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<5	<10	NC
1,1,1-Trichloroethane	13	14	7.4
1,1,2,2-Tetrachloroethane	<10	<20	NC
1,1,2-Trichloroethane	<5	<10	NC
1,1-Dichloroethane	230	250	8.3
1,1-Dichloroethene	110	120	8.7
1,1-Dichloropropene	<5	<10	NC
1,2,3-Trichlorobenzene	<5	<10	NC
1,2,3-Trichloropropane	<10	<20	NC
1,2,4-Trichlorobenzene	<5	<10	NC
1,2,4-Trimethylbenzene	4.6 J	3.4 J	NC
1,2-Dibromo-3-chloropropane	<10	<20	NC
1,2-Dibromoethane (EDB)	<5	<10	NC
1,2-Dichlorobenzene	<5	<10	NC
1,2-Dichloroethane (EDC)	<5	<10	NC
1,2-Dichloropropane	<5	<10	NC
1,3,5-Trimethylbenzene	<5	<10	NC
1,3-Dichlorobenzene	<5	<10	NC
1,3-Dichloropropane	<5	<10	NC
1,4-Dichlorobenzene	<5	<10	NC
1-Methylnaphthalene	5.9 J	6.1 J	NC
2,2-Dichloropropane	<10	<20	NC
2-Butanone	<50	<100	NC
2-Chlorotoluene	<5	<10	NC
2-Hexanone	<50	<100	NC
2-Methylnaphthalene	<20	<40	NC
4-Chlorotoluene	<5	<10	NC
4-Isopropyltoluene	1.4 J	1.3 J	NC
4-Methyl-2-pentanone	<50	<100	NC
Acetone	<50	<100	NC
Benzene	3400	2600	**26.7**
Bromobenzene	<5	<10	NC
Bromodichloromethane	<5	<10	NC
Bromoform	<5	<10	NC
Bromomethane	<15	<30	NC
Carbon disulfide	<50	<100	NC
Carbon Tetrachloride	<5	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<5	<10	NC
Chloroethane	<10	<20	NC
Chloroform	<5	<10	NC
Chloromethane	<15	<30	NC
cis-1,2-DCE	53	56	5.5
cis-1,3-Dichloropropene	<5	<10	NC
Dibromochloromethane	<5	<10	NC
Dibromomethane	<5	<10	NC
Dichlorodifluoromethane	<5	<10	NC
Ethylbenzene	150	100	**40.0**
Hexachlorobutadiene	<5	<10	NC
Isopropylbenzene	57	56	1.8
Methyl tert-butyl ether (MTBE)	260	280	7.4
Methylene Chloride	<15	<30	NC
Naphthalene	4.7 J	4.1 J	NC
n-Butylbenzene	19	18 J	NC
n-Propylbenzene	85	62	**31.3**
sec-Butylbenzene	9.5	9.2 J	NC
Styrene	<5	<10	NC
tert-Butylbenzene	<5	<10	NC
Tetrachloroethene (PCE)	2.7 J	2.7 J	NC
Toluene	15	12	22.2
trans-1,2-DCE	<5	<10	NC
trans-1,3-Dichloropropene	<5	<10	NC
Trichloroethene (TCE)	26	27	3.8
Trichlorofluoromethane	<5	<10	NC
Vinyl chloride	4 J	<10	NC
Xylenes, Total	9	7.4 J	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0095	<0.0094	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.1	1.1	0.0
Gasoline Range Organics (GRO)	12	13	8.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	21	16 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	8.9 J	10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.23	1.3	**139.9**
Chloride	500	490	2.0
Fluoride	<0.1	<0.5	NC
Phosphorus, Orthophosphate (As P)	<0.5	<2.5	NC
Sulfate	28	26	7.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0041	0.0043	4.8
Barium	0.26	0.26	0.0
Cadmium	<0.002	<0.002	NC
Calcium	100	100	0.0
Chromium	<0.006	<0.006	NC
Copper	0.0073	0.0074	1.4
Iron	0.75	0.76	1.3
Lead	<0.0005	0.00017 J	NC
Magnesium	22	22	0.0
Manganese	2.4	2.4	0.0
Potassium	0.91 J	0.83 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0021 J	0.0019 J	NC
Sodium	560	560	0.0
Uranium	0.023	0.023	0.0
Zinc	0.0096 J	0.0083 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0053	0.0056	5.5
Barium	0.33	0.37	11.4
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0025 J	NC
Copper	0.0056 J	0.0065	NC
Iron	2.6	3.1	17.5
Lead	0.0021	0.0027	**25.0**
Manganese	2.7	2.9	7.1
Mercury	0.000062 J	0.000059 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0015 J	0.0019 J	NC
Uranium	0.028	0.027	3.6
Zinc	0.0039 J	0.0059 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

25.0

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2	DUP08	RPD %
	1805523-007	1805523-008	
	5/8/2018	5/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<200	<200	NC
1,1,1-Trichloroethane	<200	<200	NC
1,1,2,2-Tetrachloroethane	<400	<400	NC
1,1,2-Trichloroethane	<200	<200	NC
1,1-Dichloroethane	<200	<200	NC
1,1-Dichloroethene	<200	<200	NC
1,1-Dichloropropene	<200	<200	NC
1,2,3-Trichlorobenzene	<200	<200	NC
1,2,3-Trichloropropane	<400	<400	NC
1,2,4-Trichlorobenzene	<200	<200	NC
1,2,4-Trimethylbenzene	340	330	3.0
1,2-Dibromo-3-chloropropane	<400	<400	NC
1,2-Dibromoethane (EDB)	<200	<200	NC
1,2-Dichlorobenzene	<200	<200	NC
1,2-Dichloroethane (EDC)	<200	<200	NC
1,2-Dichloropropane	<200	<200	NC
1,3,5-Trimethylbenzene	31 J	31 J	NC
1,3-Dichlorobenzene	<200	<200	NC
1,3-Dichloropropane	<200	<200	NC
1,4-Dichlorobenzene	<200	<200	NC
1-Methylnaphthalene	<800	<800	NC
2,2-Dichloropropane	<400	<400	NC
2-Butanone	<2000	<2000	NC
2-Chlorotoluene	<200	<200	NC
2-Hexanone	<2000	<2000	NC
2-Methylnaphthalene	<800	<800	NC
4-Chlorotoluene	<200	<200	NC
4-Isopropyltoluene	<200	<200	NC
4-Methyl-2-pentanone	<2000	<2000	NC
Acetone	<2000	<2000	NC
Benzene	46000	48000	4.3
Bromobenzene	<200	<200	NC
Bromodichloromethane	<200	<200	NC
Bromoform	<200	<200	NC
Bromomethane	<600	<600	NC
Carbon disulfide	<2000	<2000	NC
Carbon Tetrachloride	<200	<200	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2	DUP08	RPD %
	1805523-007	1805523-008	
	5/8/2018	5/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<200	<200	NC
Chloroethane	<400	<400	NC
Chloroform	<200	<200	NC
Chloromethane	<600	<600	NC
cis-1,2-DCE	<200	<200	NC
cis-1,3-Dichloropropene	<200	<200	NC
Dibromochloromethane	<200	<200	NC
Dibromomethane	<200	<200	NC
Dichlorodifluoromethane	<200	<200	NC
Ethylbenzene	1500	1600	6.5
Hexachlorobutadiene	<200	<200	NC
Isopropylbenzene	13 J	14 J	NC
Methyl tert-butyl ether (MTBE)	1200	1200	0.0
Methylene Chloride	<600	<600	NC
Naphthalene	95 J	96 J	NC
n-Butylbenzene	<600	<600	NC
n-Propylbenzene	42 J	42 J	NC
sec-Butylbenzene	<200	<200	NC
Styrene	<200	<200	NC
tert-Butylbenzene	<200	<200	NC
Tetrachloroethene (PCE)	<200	<200	NC
Toluene	5000	5100	2.0
trans-1,2-DCE	<200	<200	NC
trans-1,3-Dichloropropene	<200	<200	NC
Trichloroethene (TCE)	<200	<200	NC
Trichlorofluoromethane	<200	<200	NC
Vinyl chloride	<200	<200	NC
Xylenes, Total	4200	4200	0.0
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	9	8.2	9.3
Gasoline Range Organics (GRO)	120	120	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	0.26 J	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	8.6	8.9	3.4
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	2.2	2.2	0.0
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	4	4.3	7.2
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	19	20	5.1
2,2-Dichloropropane	<2	<2	NC
2-Butanone	8.8 J	9.2 J	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	10	11	9.5
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	3.6	3.8	5.4
4-Methyl-2-pentanone	2.3 J	2.2 J	NC
Acetone	37	41	10.3
Benzene	9.3	9.7	4.2
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	1.6	1.8	11.8
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	0.55 J	0.57 J	NC
Methyl tert-butyl ether (MTBE)	3.8	3.9	2.6
Methylene Chloride	<3	<3	NC
Naphthalene	29	30	3.4
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	0.56 J	0.59 J	NC
sec-Butylbenzene	0.28 J	0.29 J	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	0.76 J	0.78 J	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	31	32	3.2
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	72	67	7.2
Gasoline Range Organics (GRO)	0.4	0.36	10.5
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<50	<50	NC
1,2-Dichlorobenzene	<50	<50	NC
1,3-Dichlorobenzene	<50	<50	NC
1,4-Dichlorobenzene	<50	<50	NC
1-Methylnaphthalene	340	400	16.2
2,4,5-Trichlorophenol	<50	<50	NC
2,4,6-Trichlorophenol	<50	<50	NC
2,4-Dichlorophenol	<100	<100	NC
2,4-Dimethylphenol	<50	<50	NC
2,4-Dinitrophenol	<100	<100	NC
2,4-Dinitrotoluene	<50	<50	NC
2,6-Dinitrotoluene	<50	<50	NC
2-Chloronaphthalene	<50	<50	NC
2-Chlorophenol	<50	<50	NC
2-Methylnaphthalene	<50	<50	NC
2-Methylphenol	<50	<50	NC
2-Nitroaniline	<50	<50	NC
2-Nitrophenol	<50	<50	NC
3,3´-Dichlorobenzidine	<50	<50	NC
3+4-Methylphenol	<50	<50	NC
3-Nitroaniline	<50	<50	NC
4,6-Dinitro-2-methylphenol	<100	<100	NC
4-Bromophenyl phenyl ether	<50	<50	NC
4-Chloro-3-methylphenol	<50	<50	NC
4-Chloroaniline	<50	<50	NC
4-Chlorophenyl phenyl ether	<50	<50	NC
4-Nitroaniline	<50	<50	NC
4-Nitrophenol	<50	<50	NC
Acenaphthene	<50	<50	NC
Acenaphthylene	<50	<50	NC
Aniline	<50	<50	NC
Anthracene	<50	<50	NC
Azobenzene	<50	<50	NC
Benz(a)anthracene	<50	<50	NC
Benzo(a)pyrene	<50	<50	NC
Benzo(b)fluoranthene	<50	<50	NC
Benzo(g,h,i)perylene	<50	<50	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<50	<50	NC
Benzoic acid	69 J	76 J	NC
Benzyl alcohol	<50	<50	NC
Bis(2-chloroethoxy)methane	<50	<50	NC
Bis(2-chloroethyl)ether	<50	<50	NC
Bis(2-chloroisopropyl)ether	<50	<50	NC
Bis(2-ethylhexyl)phthalate	<50	<50	NC
Butyl benzyl phthalate	<50	<50	NC
Carbazole	<50	<50	NC
Chrysene	<50	<50	NC
Dibenz(a,h)anthracene	<50	<50	NC
Dibenzofuran	<50	<50	NC
Diethyl phthalate	<50	<50	NC
Dimethyl phthalate	<50	<50	NC
Di-n-butyl phthalate	<50	<50	NC
Di-n-octyl phthalate	<50	<50	NC
Fluoranthene	<50	<50	NC
Fluorene	<50	<50	NC
Hexachlorobenzene	<50	<50	NC
Hexachlorobutadiene	<50	<50	NC
Hexachlorocyclopentadiene	<50	<50	NC
Hexachloroethane	<50	<50	NC
Indeno(1,2,3-cd)pyrene	<50	<50	NC
Isophorone	<50	<50	NC
Naphthalene	<50	<50	NC
Nitrobenzene	<50	<50	NC
N-Nitrosodimethylamine	<50	<50	NC
N-Nitrosodi-n-propylamine	<50	<50	NC
N-Nitrosodiphenylamine	<50	<50	NC
Pentachlorophenol	<100	<100	NC
Phenanthrene	<50	<50	NC
Phenol	<50	<50	NC
Pyrene	<50	<50	NC
Pyridine	<50	<50	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.6	1.6	0.0
Chloride	920	940	2.2
Fluoride	0.47 J	0.5 J	NC
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	95	95	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.057	0.061	6.8
Cadmium	<0.002	<0.002	NC
Calcium	21	22	4.7
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.096	0.1	4.1
Lead	<0.0025	<0.0025	NC
Magnesium	2.8	2.8	0.0
Manganese	0.17	0.17	0.0
Potassium	1.3	1.4	7.4
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Sodium	720	730	1.4
Uranium	0.0077	0.0086	11.0
Zinc	0.006 J	0.0092 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP09	RPD %
	1805651-001	1805651-007	
	5/9/2018	5/9/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.002	0.002	0.0
Barium	0.08	0.081	1.2
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.0067	0.0046 J	NC
Iron	0.75	0.8	6.5
Lead	0.0011	0.00095	14.6
Manganese	0.15	0.18	18.2
Mercury	0.000067 J	0.00007 J	NC
Selenium	0.0012	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.012	0.01	18.2
Zinc	0.0085 J	0.0041 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	0.28 J	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	570	560	1.8
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.5	0.72 J	NC
Gasoline Range Organics (GRO)	0.5	0.49	2.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	11 J	12 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.55	0.56	1.8
Chloride	100	97	3.0
Fluoride	0.15	0.16	6.5
Nitrogen, Nitrate (As N)	0.15	0.13	14.3
Nitrogen, Nitrite (As N)	<0.1	<0.1	NC
Phosphorus, Orthophosphate (As P)	<0.5	<0.5	NC
Sulfate	210	200	4.9
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00076 J	0.00074 J	NC
Barium	0.042	0.044	4.7
Cadmium	<0.002	<0.002	NC
Calcium	75	74	1.3
Chromium	<0.006	<0.006	NC
Copper	<0.006	0.0033 J	NC
Iron	<0.02	0.02	NC
Lead	<0.0025	<0.0025	NC
Magnesium	16	16	0.0
Manganese	0.15	0.16	6.5
Potassium	0.91 J	0.9 J	NC
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Sodium	290	290	0.0
Uranium	0.032	0.034	6.1
Zinc	0.0069 J	<0.05	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP10	RPD %
	1805682-003	1805682-007	
	5/10/2018	5/10/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.00059 J	0.0006 J	NC
Barium	0.1	0.097	3.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	1.6	1.4	13.3
Lead	0.0016	0.0015	6.5
Manganese	0.22	0.23	4.4
Mercury	0.000064 J	0.000071 J	NC
Selenium	<0.001	0.00099 J	NC
Silver	0.0017 J	0.0018 J	NC
Uranium	0.034	0.035	2.9
Zinc	0.0043 J	0.0051 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C 1805872-002 5/14/2018 Sample Result	DUP 11 1805872-004 5/14/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	0.81 J	0.81 J	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	0.63 J	0.65 J	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	2 J	2.6 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP 11	RPD %
	1805872-002	1805872-004	
	5/14/2018	5/14/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	32	31	3.2
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP 11	RPD %
	1805872-002	1805872-004	
	5/14/2018	5/14/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP 11	RPD %
	1805872-002	1805872-004	
	5/14/2018	5/14/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	13 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C 1805872-002 5/14/2018 Sample Result	DUP 11 1805872-004 5/14/2018 Field Duplicate	RPD %
General Chemistry - E300 (mg/L)			
Bromide	0.48	0.5	4.1
Chloride	1300	1200	8.0
Fluoride	<0.1	<0.1	NC
Nitrate+Nitrite as N	<1	0.46 J	NC
Phosphorus, Orthophosphate (As P)	<0.5	<0.5	NC
Sulfate	190	180	5.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0036 J	0.0036 J	NC
Barium	0.088	0.088	0.0
Cadmium	<0.002	<0.002	NC
Calcium	56	55	1.8
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.42	0.34	21.1
Lead	<0.0025	<0.0025	NC
Magnesium	6.7	6.7	0.0
Manganese	0.03	0.032	6.5
Potassium	3	3	0.0
Selenium	<0.02	<0.02	NC
Silver	<0.005	<0.005	NC
Sodium	1000	1000	0.0
Uranium	0.048	0.047	2.1
Zinc	0.0059 J	0.0072 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C 1805872-002 5/14/2018 Sample Result	DUP 11 1805872-004 5/14/2018 Field Duplicate	RPD %
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.13	0.13	0.0
Cadmium	<0.002	<0.002	NC
Chromium	0.0034 J	0.004 J	NC
Copper	<0.006	<0.006	NC
Iron	1.5	1.7	12.5
Lead	<0.0025	<0.0025	NC
Manganese	0.048	0.048	0.0
Mercury	0.00016 J	0.00015 J	NC
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Uranium	0.043	0.044	2.3
Zinc	0.0072 J	0.0069 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP12	RPD %
	1805972-002	1805972-006	
	5/15/2018	5/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	1.6 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP12	RPD %
	1805972-002	1805972-006	
	5/15/2018	5/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	2	2.1	4.9
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP12	RPD %
	1805972-002	1805972-006	
	5/15/2018	5/15/2018	
	Sample Result	Field Duplicate	
E504.1			
1,2-Dibromoethane	<0.00941	<0.00928	NC
General Chemistry - E300 (mg/L)			
Bromide	0.29	0.3	3.4
Chloride	110	110	0.0
Fluoride	0.11	0.12	8.7
Nitrate+Nitrite as N	0.35 J	0.33 J	NC
Phosphorus, Orthophosphate (As P)	<0.05	<0.05	NC
Sulfate	140	130	7.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00074 J	0.00073 J	NC
Barium	0.033	0.034	3.0
Cadmium	<0.002	<0.002	NC
Calcium	2.2	2.1	4.7
Chromium	<0.006	0.0013 J	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	<1	<1	NC
Manganese	0.0045	0.0044	2.2
Potassium	0.67 J	0.69 J	NC
Selenium	0.0024	0.0022	8.7
Silver	<0.005	<0.005	NC
Sodium	330	320	3.1
Uranium	0.034	0.034	0.0
Zinc	0.0074 J	0.0062 J	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP12	RPD %
	1805972-002	1805972-006	
	5/15/2018	5/15/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.00081 J	0.0012	NC
Barium	0.04	0.061	**41.6**
Cadmium	<0.002	<0.002	NC
Chromium	0.0029 J	0.0076	NC
Copper	<0.006	0.051	NC
Iron	0.27	1.8	**147.8**
Lead	0.00032 J	0.002	NC
Manganese	0.018	0.093	**135.1**
Mercury	0.00012 J	0.00011 J	NC
Selenium	0.0023	0.0023	0.0
Silver	<0.005	<0.005	NC
Uranium	0.035	0.036	2.8
Zinc	<0.01	0.023	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

135.1

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-29	DUP13	RPD %
	1805A27-003	1805A27-004	
	5/16/2018	5/16/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<2	<1	NC
1,1,1-Trichloroethane	<2	<1	NC
1,1,2,2-Tetrachloroethane	<4	<2	NC
1,1,2-Trichloroethane	<2	<1	NC
1,1-Dichloroethane	<2	<1	NC
1,1-Dichloroethene	<2	<1	NC
1,1-Dichloropropene	<2	<1	NC
1,2,3-Trichlorobenzene	<2	<1	NC
1,2,3-Trichloropropane	<4	<2	NC
1,2,4-Trichlorobenzene	<2	<1	NC
1,2,4-Trimethylbenzene	<2	<1	NC
1,2-Dibromo-3-chloropropane	<4	<2	NC
1,2-Dibromoethane (EDB)	<2	<1	NC
1,2-Dichlorobenzene	<2	<1	NC
1,2-Dichloroethane (EDC)	<2	0.58	NC
1,2-Dichloropropane	<2	<1	NC
1,3,5-Trimethylbenzene	<2	<1	NC
1,3-Dichlorobenzene	<2	<1	NC
1,3-Dichloropropane	<2	<1	NC
1,4-Dichlorobenzene	<2	<1	NC
1-Methylnaphthalene	<8	<4	NC
2,2-Dichloropropane	<4	<2	NC
2-Butanone	<20	<10	NC
2-Chlorotoluene	<2	<1	NC
2-Hexanone	<20	<10	NC
2-Methylnaphthalene	<8	<4	NC
4-Chlorotoluene	<2	<1	NC
4-Isopropyltoluene	<2	<1	NC
4-Methyl-2-pentanone	<20	<10	NC
Acetone	<20	<10	NC
Benzene	<2	<1	NC
Bromobenzene	<2	<1	NC
Bromodichloromethane	<2	<1	NC
Bromoform	<2	<1	NC
Bromomethane	<6	<3	NC
Carbon disulfide	<20	<10	NC
Carbon Tetrachloride	<2	<1	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-29	DUP13	RPD %
	1805A27-003	1805A27-004	
	5/16/2018	5/16/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<2	<1	NC
Chloroethane	<4	<2	NC
Chloroform	<2	<1	NC
Chloromethane	<6	<3	NC
cis-1,2-DCE	<2	<1	NC
cis-1,3-Dichloropropene	<2	<1	NC
Dibromochloromethane	<2	<1	NC
Dibromomethane	<2	<1	NC
Dichlorodifluoromethane	<2	<1	NC
Ethylbenzene	<2	<1	NC
Hexachlorobutadiene	<2	<1	NC
Isopropylbenzene	<2	<1	NC
Methyl tert-butyl ether (MTBE)	3800	3800	0.0
Methylene Chloride	<6	<3	NC
Naphthalene	<4	<2	NC
n-Butylbenzene	<6	<3	NC
n-Propylbenzene	<2	<1	NC
sec-Butylbenzene	<2	<1	NC
Styrene	<2	<1	NC
tert-Butylbenzene	<2	<1	NC
Tetrachloroethene (PCE)	<2	<1	NC
Toluene	<2	<1	NC
trans-1,2-DCE	<2	<1	NC
trans-1,3-Dichloropropene	<2	<1	NC
Trichloroethene (TCE)	<2	<1	NC
Trichlorofluoromethane	<2	<1	NC
Vinyl chloride	<2	<1	NC
Xylenes, Total	<3	<1.5	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0095	<0.0094	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.5	2.8	**60.5**
Gasoline Range Organics (GRO)	<1	<1	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Second Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-29	DUP13	RPD %
	1805A27-003	1805A27-004	
	5/16/2018	5/16/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.064	0.064	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.21	0.23	9.1
Lead	<0.0025	<0.0025	NC
Manganese	0.28	0.28	0.0
Selenium	0.004 J	0.004 J	NC
Silver	<0.005	<0.005	NC
Uranium	0.047	0.048	2.1
Zinc	0.011	0.01	9.5
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.07	0.069	1.4
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.56	0.55	1.8
Lead	<0.0005	<0.0005	NC
Manganese	0.32	0.31	3.2
Mercury	0.000043 J	0.000047 J	NC
Selenium	0.0024	0.0023	4.3
Silver	<0.005	<0.005	NC
Uranium	0.054	0.053	1.9
Zinc	0.0035 J	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

60.5

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<10	<1	NC
1,1,1-Trichloroethane	<10	<1	NC
1,1,2,2-Tetrachloroethane	<20	<2	NC
1,1,2-Trichloroethane	<10	0.62 J	NC
1,1-Dichloroethane	140	140	0.0
1,1-Dichloroethene	49	51	4.0
1,1-Dichloropropene	<10	<1	NC
1,2,3-Trichlorobenzene	<10	<1	NC
1,2,3-Trichloropropane	<20	<2	NC
1,2,4-Trichlorobenzene	<10	<1	NC
1,2,4-Trimethylbenzene	<10	1.2	NC
1,2-Dibromo-3-chloropropane	<20	<2	NC
1,2-Dibromoethane (EDB)	<10	<1	NC
1,2-Dichlorobenzene	<10	<1	NC
1,2-Dichloroethane (EDC)	8.5 J	7.2	NC
1,2-Dichloropropane	<10	<1	NC
1,3,5-Trimethylbenzene	<10	<1	NC
1,3-Dichlorobenzene	<10	<1	NC
1,3-Dichloropropane	<10	<1	NC
1,4-Dichlorobenzene	<10	<1	NC
1-Methylnaphthalene	<40	3.9 J	NC
2,2-Dichloropropane	<20	<2	NC
2-Butanone	<100	<10	NC
2-Chlorotoluene	<10	<1	NC
2-Hexanone	<100	<10	NC
2-Methylnaphthalene	<40	<4	NC
4-Chlorotoluene	<10	<1	NC
4-Isopropyltoluene	<10	0.97 J	NC
4-Methyl-2-pentanone	<100	<10	NC
Acetone	<100	<10	NC
Benzene	4500	4500	0.0
Bromobenzene	<10	<1	NC
Bromodichloromethane	<10	<1	NC
Bromoform	<10	<1	NC
Bromomethane	<30	<3	NC
Carbon disulfide	<100	<10	NC
Carbon Tetrachloride	<10	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<10	<1	NC
Chloroethane	<20	<2	NC
Chloroform	<10	<1	NC
Chloromethane	<30	<3	NC
cis-1,2-DCE	52	50	3.9
cis-1,3-Dichloropropene	<10	<1	NC
Dibromochloromethane	<10	<1	NC
Dibromomethane	<10	<1	NC
Dichlorodifluoromethane	<10	<1	NC
Ethylbenzene	26	26	0.0
Hexachlorobutadiene	<10	<1	NC
Isopropylbenzene	35	37	5.6
Methyl tert-butyl ether (MTBE)	250	260	3.9
Methylene Chloride	<30	<3	NC
Naphthalene	3.3 J	4.1	NC
n-Butylbenzene	12 J	14	NC
n-Propylbenzene	64	64	0.0
sec-Butylbenzene	5.6 J	7.2	NC
Styrene	<10	<1	NC
tert-Butylbenzene	<10	<1	NC
Tetrachloroethene (PCE)	<10	1.9	NC
Toluene	17	16	6.1
trans-1,2-DCE	<10	<1	NC
trans-1,3-Dichloropropene	<10	<1	NC
Trichloroethene (TCE)	6 J	6.6	NC
Trichlorofluoromethane	<10	<1	NC
Vinyl chloride	<10	<1	NC
Xylenes, Total	<15	3.8	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.00924	<0.00927	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1	1.1	9.5
Gasoline Range Organics (GRO)	17	17	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	9.9 J	11 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	23	34	**38.6**
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.1	1.1	0.0
Chloride	540	540	0.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	23	23	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0052	0.0052	0.0
Barium	0.33	0.31	6.3
Cadmium	<0.002	<0.002	NC
Calcium	100	100	0.0
Chromium	<0.006	<0.006	NC
Copper	0.0051 J	<0.006	NC
Iron	0.97	0.92	5.3
Lead	0.00025 J	0.00018 J	NC
Magnesium	18	18	0.0
Manganese	2.4	2.5	4.1
Potassium	1	1	0.0
Selenium	<0.001	<0.001	NC
Silver	0.0033 J	0.0027 J	NC
Sodium	500	600	18.2
Uranium	0.027	0.027	0.0
Zinc	0.0075 J	0.0065 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0055	0.0054	1.8
Barium	0.48	0.45	6.5
Cadmium	<0.002	<0.002	NC
Chromium	0.0033 J	0.0047 J	NC
Copper	0.011	0.011	0.0
Iron	12	8.2	**37.6**
Lead	0.0063	0.006	4.9
Manganese	3	3.1	3.3
Mercury	0.000049 J	0.000053 J	NC
Selenium	<0.005	<0.005	NC
Silver	0.0023 J	0.0021 J	NC
Uranium	0.029	0.029	0.0
Zinc	0.013	0.013	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

37.6

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	4.7	4.4	6.6
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.021 J	0.02 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	8.4 J	7 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.79	0.87	9.6
Chloride	200	180	10.5
Fluoride	0.57	0.62	8.4
Phosphorus, Orthophosphate (As P)	<2.5	1.4 J	NC
Sulfate	520	470	10.1
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0012	0.0012	0.0
Barium	0.026	0.024	8.0
Cadmium	<0.002	<0.002	NC
Calcium	72	71	1.4
Chromium	<0.006	<0.006	NC
Copper	0.0038 J	<0.006	NC
Iron	0.053	0.03	**55.4**
Lead	<0.0005	<0.0005	NC
Magnesium	9.5	9.5	0.0
Manganese	0.48	0.47	2.1
Potassium	0.29 J	0.26 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.002 J	<0.005	NC
Sodium	580	570	1.7
Uranium	0.0082	0.0083	1.2
Zinc	0.0076 J	0.016	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808D32-004	1808D32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.002	0.002	0.0
Barium	0.15	0.15	0.0
Cadmium	<0.002	<0.002	NC
Chromium	0.004 J	0.0042 J	NC
Copper	0.0078	0.0065	18.2
Iron	4.5	3.9	14.3
Lead	0.0023	0.0022	4.4
Manganese	0.6	0.57	5.1
Mercury	<0.0002	0.000051 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0018 J	0.0022 J	NC
Uranium	0.0085	0.0085	0.0
Zinc	0.012	0.01	18.2

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	0.5 J	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	3.7 J	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	0.36 J	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.025 J	0.02 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	8.6 J	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.1	1.2	8.7
Chloride	370	380	2.7
Fluoride	0.8	0.77	3.8
Phosphorus, Orthophosphate (As P)	1.6 J	1.6 J	NC
Sulfate	300	310	3.3
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0014	0.0014	0.0
Barium	0.043	0.044	2.3
Cadmium	<0.002	<0.002	NC
Calcium	190	190	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.037	0.071	**63.0**
Lead	<0.0025	<0.0025	NC
Magnesium	35	35	0.0
Manganese	2.2	2.2	0.0
Potassium	0.65 J	0.72 J	NC
Selenium	0.00076 J	<0.001	NC
Silver	0.004 J	0.004 J	NC
Sodium	360	360	0.0
Uranium	0.027	0.027	0.0
Zinc	0.01	0.0095 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-38	DUP03	RPD %
	1808E67-003	1808E67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0029	0.0031	6.7
Barium	0.18	0.19	5.4
Cadmium	<0.002	<0.002	NC
Chromium	0.0018	<0.006	NC
Copper	<0.006	0.0046 J	18.2
Iron	2.8	3	6.9
Lead	0.0026	0.0027	3.8
Manganese	3	2.8	6.9
Mercury	0.000061	0.000053 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.005	0.0052	3.9
Uranium	0.028	0.028	0.0
Zinc	0.011	0.0096 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

63.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<20	<20	NC
1,1,1-Trichloroethane	<20	<20	NC
1,1,2,2-Tetrachloroethane	<40	<40	NC
1,1,2-Trichloroethane	<20	<20	NC
1,1-Dichloroethane	<20	<20	NC
1,1-Dichloroethene	<20	<20	NC
1,1-Dichloropropene	<20	<20	NC
1,2,3-Trichlorobenzene	<20	<20	NC
1,2,3-Trichloropropane	<40	<40	NC
1,2,4-Trichlorobenzene	<20	<20	NC
1,2,4-Trimethylbenzene	14 J	14 J	NC
1,2-Dibromo-3-chloropropane	<40	<40	NC
1,2-Dibromoethane (EDB)	<20	<20	NC
1,2-Dichlorobenzene	<20	<20	NC
1,2-Dichloroethane (EDC)	<20	<20	NC
1,2-Dichloropropane	<20	<20	NC
1,3,5-Trimethylbenzene	36	37	2.7
1,3-Dichlorobenzene	<20	<20	NC
1,3-Dichloropropane	<20	<20	NC
1,4-Dichlorobenzene	<20	<20	NC
1-Methylnaphthalene	92	85	7.9
2,2-Dichloropropane	<40	<40	NC
2-Butanone	<200	<200	NC
2-Chlorotoluene	<20	<20	NC
2-Hexanone	<200	<200	NC
2-Methylnaphthalene	110	110	NC
4-Chlorotoluene	<20	<20	NC
4-Isopropyltoluene	<20	<20	NC
4-Methyl-2-pentanone	<200	<200	NC
Acetone	590	330	**56.5**
Benzene	9000	8600	4.5
Bromobenzene	<20	<20	NC
Bromodichloromethane	<20	<20	NC
Bromoform	<20	<20	NC
Bromomethane	<60	<60	NC
Carbon disulfide	<200	<200	NC
Carbon Tetrachloride	<20	<20	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<20	<20	NC
Chloroethane	<40	<40	NC
Chloroform	<20	<20	NC
Chloromethane	<60	<60	NC
cis-1,2-DCE	<20	<20	NC
cis-1,3-Dichloropropene	<20	<20	NC
Dibromochloromethane	<20	<20	NC
Dibromomethane	<20	<20	NC
Dichlorodifluoromethane	<20	<20	NC
Ethylbenzene	1100	1100	0.0
Hexachlorobutadiene	<20	<20	NC
Isopropylbenzene	54	51	5.7
Methyl tert-butyl ether (MTBE)	48	45	6.5
Methylene Chloride	<60	<60	NC
Naphthalene	330	320	3.1
n-Butylbenzene	22 J	20 J	NC
n-Propylbenzene	180	170	5.7
sec-Butylbenzene	7.2 J	7 J	NC
Styrene	<20	<20	NC
tert-Butylbenzene	<20	<20	NC
Tetrachloroethene (PCE)	<20	<20	NC
Toluene	84	83	1.2
trans-1,2-DCE	<20	<20	NC
trans-1,3-Dichloropropene	<20	<20	NC
Trichloroethene (TCE)	<20	<20	NC
Trichlorofluoromethane	<20	<20	NC
Vinyl chloride	<20	<20	NC
Xylenes, Total	520	510	1.9
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	5.9	5.4	8.8
Gasoline Range Organics (GRO)	35	34	2.9
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	77	69	11.0
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	17	18	5.7
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	91	81	11.6
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	39	37	5.3
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	210	180	15.4
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	25	23	8.3
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.54	0.61	12.2
Chloride	88	90	2.2
Fluoride	0.39 J	0.4 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	<2.5	<2.5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.011	0.011	0.0
Barium	3.9	4	2.5
Cadmium	<0.002	<0.002	NC
Calcium	87	89	2.3
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	5.8	5.8	0.0
Lead	<0.0005	<0.0005	NC
Magnesium	16	16	0.0
Manganese	1.2	1.3	8.0
Potassium	0.56 J	0.48 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0022 J	<0.005	NC
Sodium	310	310	0.0
Uranium	0.0002 J	0.00023 J	NC
Zinc	0.011	0.015	**30.8**

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-63	DUP04	RPD %
	1808F6-003	1808F16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.013	0.012	8.0
Barium	3.8	3.9	2.6
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	18.2
Iron	5.9	6.2	5.0
Lead	0.00078	0.00061	24.5
Manganese	1.6	1.2	**28.6**
Mercury	0.000047 J	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.002 J	0.0015 J	NC
Uranium	0.00037 J	0.00017 J	NC
Zinc	0.0064 J	0.0061 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

28.6

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<10	<10	NC
1,1,1-Trichloroethane	5.5 J	5.4 J	NC
1,1,2,2-Tetrachloroethane	<20	<20	NC
1,1,2-Trichloroethane	<10	<10	NC
1,1-Dichloroethane	24	23	4.3
1,1-Dichloroethene	76	74	2.7
1,1-Dichloropropene	<10	<10	NC
1,2,3-Trichlorobenzene	<10	<10	NC
1,2,3-Trichloropropane	<20	<20	NC
1,2,4-Trichlorobenzene	<10	<10	NC
1,2,4-Trimethylbenzene	530	560	5.5
1,2-Dibromo-3-chloropropane	<20	<20	NC
1,2-Dibromoethane (EDB)	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,2-Dichloroethane (EDC)	14	14	0.0
1,2-Dichloropropane	<10	<10	NC
1,3,5-Trimethylbenzene	35	41	15.8
1,3-Dichlorobenzene	<10	<10	NC
1,3-Dichloropropane	<10	<10	NC
1,4-Dichlorobenzene	8.2 J	8.3 J	NC
1-Methylnaphthalene	51	49	4.0
2,2-Dichloropropane	<20	<20	NC
2-Butanone	<100	<100	NC
2-Chlorotoluene	<10	<10	NC
2-Hexanone	<100	<100	NC
2-Methylnaphthalene	60	60	0.0
4-Chlorotoluene	<10	<10	NC
4-Isopropyltoluene	6.3 J	6.4 J	NC
4-Methyl-2-pentanone	<100	<100	NC
Acetone	<100	36 J	NC
Benzene	1300	1300	0.0
Bromobenzene	<10	<10	NC
Bromodichloromethane	<10	<10	NC
Bromoform	<10	<10	NC
Bromomethane	<30	<30	NC
Carbon disulfide	<100	<100	NC
Carbon Tetrachloride	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<10	<10	NC
Chloroethane	<20	<20	NC
Chloroform	<10	<10	NC
Chloromethane	<30	<30	NC
cis-1,2-DCE	<10	<10	NC
cis-1,3-Dichloropropene	<10	<10	NC
Dibromochloromethane	<10	<10	NC
Dibromomethane	<10	<10	NC
Dichlorodifluoromethane	<10	<10	NC
Ethylbenzene	36	35	2.8
Hexachlorobutadiene	<10	<10	NC
Isopropylbenzene	67	68	1.5
Methyl tert-butyl ether (MTBE)	37	36	2.7
Methylene Chloride	<30	<30	NC
Naphthalene	310	320	3.2
n-Butylbenzene	34	34	0.0
n-Propylbenzene	88	93	5.5
sec-Butylbenzene	13	13	0.0
Styrene	<10	<10	NC
tert-Butylbenzene	<10	<10	NC
Tetrachloroethene (PCE)	<10	<10	NC
Toluene	14	15	6.9
trans-1,2-DCE	<10	<10	NC
trans-1,3-Dichloropropene	<10	<10	NC
Trichloroethene (TCE)	200	200	0.0
Trichlorofluoromethane	<10	<10	NC
Vinyl chloride	<10	<10	NC
Xylenes, Total	370	380	2.7
E504.1 (ug/L)			
1,2-Dibromoethane	0.067	0.068	1.5
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	3	4	**28.6**
Gasoline Range Organics (GRO)	17	14	19.4
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	6.2 J	<10	NC
1-Methylnaphthalene	68	50	**30.5**
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	84	57	**38.3**
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	16 J	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	280	180	**43.5**
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	18	12	**40.0**
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.57	0.59	3.4
Chloride	140	130	7.4
Fluoride	0.47 J	0.45 J	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	20	22	9.5
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0024	0.0024	0.0
Barium	0.96	0.98	2.1
Cadmium	<0.002	<0.002	NC
Calcium	34	35	2.9
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.99	1.1	10.5
Lead	0.00088	0.00098	10.8
Magnesium	7.2	7.4	2.7
Manganese	0.55	0.57	3.6
Potassium	1.8	1.8	0.0
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	240	240	0.0
Uranium	0.019	0.018	5.4
Zinc	0.0081 J	0.0082 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-37	DUP05	RPD %
	1808F55-001	1808F55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0024	0.0023	1.8
Barium	0.84	0.8	6.5
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.012	0.011	0.0
Iron	4.8	4.6	**37.6**
Lead	0.013	0.012	4.9
Manganese	0.49	0.47	3.3
Mercury	0.00012 J	0.00014 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	0.0013 J	NC
Uranium	0.019	0.02	0.0
Zinc	0.018	0.014	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

37.6

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<2	NC
1,1,1-Trichloroethane	<1	<2	NC
1,1,2,2-Tetrachloroethane	<2	<4	NC
1,1,2-Trichloroethane	<1	<2	NC
1,1-Dichloroethane	<1	<2	NC
1,1-Dichloroethene	2.4	2.2	8.7
1,1-Dichloropropene	<1	<2	NC
1,2,3-Trichlorobenzene	<1	<2	NC
1,2,3-Trichloropropane	<2	<4	NC
1,2,4-Trichlorobenzene	<1	<2	NC
1,2,4-Trimethylbenzene	<1	<2	NC
1,2-Dibromo-3-chloropropane	<2	<4	NC
1,2-Dibromoethane (EDB)	<1	<2	NC
1,2-Dichlorobenzene	<1	<2	NC
1,2-Dichloroethane (EDC)	<1	<2	NC
1,2-Dichloropropane	<1	<2	NC
1,3,5-Trimethylbenzene	<1	<2	NC
1,3-Dichlorobenzene	<1	<2	NC
1,3-Dichloropropane	<1	<2	NC
1,4-Dichlorobenzene	<1	<2	NC
1-Methylnaphthalene	<4	2.1 J	NC
2,2-Dichloropropane	<2	<4	NC
2-Butanone	<10	<20	NC
2-Chlorotoluene	<1	<2	NC
2-Hexanone	<10	<20	NC
2-Methylnaphthalene	<4	0.93 J	NC
4-Chlorotoluene	<1	<2	NC
4-Isopropyltoluene	<1	<2	NC
4-Methyl-2-pentanone	<10	<20	NC
Acetone	<10	<20	NC
Benzene	0.24 J	<2	NC
Bromobenzene	<1	<2	NC
Bromodichloromethane	<1	<2	NC
Bromoform	<1	<2	NC
Bromomethane	<3	<6	NC
Carbon disulfide	<10	<20	NC
Carbon Tetrachloride	<1	<2	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<2	NC
Chloroethane	<2	<4	NC
Chloroform	<1	<2	NC
Chloromethane	<3	<6	NC
cis-1,2-DCE	<1	<2	NC
cis-1,3-Dichloropropene	<1	<2	NC
Dibromochloromethane	<1	<2	NC
Dibromomethane	<1	<2	NC
Dichlorodifluoromethane	<1	<2	NC
Ethylbenzene	<1	<2	NC
Hexachlorobutadiene	<1	<2	NC
Isopropylbenzene	<1	<2	NC
Methyl tert-butyl ether (MTBE)	0.87 J	0.99 J	NC
Methylene Chloride	<3	<6	NC
Naphthalene	0.49 J	<4	NC
n-Butylbenzene	<3	<6	NC
n-Propylbenzene	<1	<2	NC
sec-Butylbenzene	<1	<2	NC
Styrene	<1	<2	NC
tert-Butylbenzene	<1	<2	NC
Tetrachloroethene (PCE)	0.22 J	<2	NC
Toluene	<1	<2	NC
trans-1,2-DCE	<1	<2	NC
trans-1,3-Dichloropropene	<1	<2	NC
Trichloroethene (TCE)	3.6	3.4	5.7
Trichlorofluoromethane	<1	<2	NC
Vinyl chloride	<1	<2	NC
Xylenes, Total	<1.5	<3	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	7.1 J	6.6 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.3	8.0
Chloride	220	240	8.7
Fluoride	0.32 J	0.35 J	NC
Nitrogen, Nitrate (As N)	8.1	8.1	0.0
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	230	210	9.1
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0011	0.0012	8.7
Barium	0.045	0.045	0.0
Cadmium	<0.002	<0.002	NC
Calcium	59	59	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	14	14	0.0
Manganese	<0.002	<0.002	NC
Potassium	1.4	1.4	0.0
Selenium	0.0025	0.0025	0.0
Silver	<0.005	<0.005	NC
Sodium	400	400	0.0
Uranium	0.036	0.036	0.0
Zinc	0.0094 J	0.014	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808F55-006	1808F55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0016	0.0019	17.1
Barium	0.06	0.087	**36.7**
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0019 J	NC
Copper	<0.006	0.0046 J	NC
Iron	0.83	2.5	**100.3**
Lead	0.00073	0.0021	**96.8**
Manganese	0.022	0.053	**82.7**
Mercury	0.0004	0.00019 J	NC
Selenium	0.0024	0.0027	11.8
Silver	0.0022 J	0.0015 J	NC
Uranium	0.03	0.029	3.4
Zinc	0.012	0.023	**62.9**

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

62.9

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2 1808H79-009 8/28/2018 Sample Result	DUP07 1808H79-013 8/28/2018 Field Duplicate	RPD %
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<100	<100	NC
1,1,1-Trichloroethane	<100	<100	NC
1,1,2,2-Tetrachloroethane	<200	<200	NC
1,1,2-Trichloroethane	<100	<100	NC
1,1-Dichloroethane	<100	<100	NC
1,1-Dichloroethene	<100	<100	NC
1,1-Dichloropropene	<100	<100	NC
1,2,3-Trichlorobenzene	<100	<100	NC
1,2,3-Trichloropropane	<200	<200	NC
1,2,4-Trichlorobenzene	<100	<100	NC
1,2,4-Trimethylbenzene	310	290	6.7
1,2-Dibromo-3-chloropropane	<200	<200	NC
1,2-Dibromoethane (EDB)	<100	<100	NC
1,2-Dichlorobenzene	<100	<100	NC
1,2-Dichloroethane (EDC)	<100	<100	NC
1,2-Dichloropropane	<100	<100	NC
1,3,5-Trimethylbenzene	43 J	40 J	NC
1,3-Dichlorobenzene	<100	<100	NC
1,3-Dichloropropane	<100	<100	NC
1,4-Dichlorobenzene	<100	<100	NC
1-Methylnaphthalene	40 J	40 J	NC
2,2-Dichloropropane	<200	<200	NC
2-Butanone	<1000	<1000	NC
2-Chlorotoluene	<100	<100	NC
2-Hexanone	<1000	<1000	NC
2-Methylnaphthalene	<400	<400	NC
4-Chlorotoluene	<100	<100	NC
4-Isopropyltoluene	<100	<100	NC
4-Methyl-2-pentanone	<1000	<1000	NC
Acetone	<1000	<1000	NC
Benzene	48000	48000	0.0
Bromobenzene	<100	<100	NC
Bromodichloromethane	<100	<100	NC
Bromoform	<100	<100	NC
Bromomethane	<300	<300	NC
Carbon disulfide	<1000	<1000	NC
Carbon Tetrachloride	<100	<100	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	RW-2	DUP07	RPD %
	1808H79-009	1808H79-013	
	8/28/2018	8/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<100	<100	NC
Chloroethane	<200	<200	NC
Chloroform	<100	<100	NC
Chloromethane	<300	<300	NC
cis-1,2-DCE	<100	<100	NC
cis-1,3-Dichloropropene	<100	<100	NC
Dibromochloromethane	<100	<100	NC
Dibromomethane	<100	<100	NC
Dichlorodifluoromethane	<100	<100	NC
Ethylbenzene	1500	1400	6.9
Hexachlorobutadiene	<100	<100	NC
Isopropylbenzene	24 J	26 J	NC
Methyl tert-butyl ether (MTBE)	1100	1200	8.7
Methylene Chloride	<300	<300	NC
Naphthalene	100 J	99 J	NC
n-Butylbenzene	<300	<300	NC
n-Propylbenzene	56 J	51 J	NC
sec-Butylbenzene	<100	<100	NC
Styrene	<100	<100	NC
tert-Butylbenzene	<100	<100	NC
Tetrachloroethene (PCE)	<100	<100	NC
Toluene	4000	4000	0.0
trans-1,2-DCE	<100	<100	NC
trans-1,3-Dichloropropene	<100	<100	NC
Trichloroethene (TCE)	<100	<100	NC
Trichlorofluoromethane	<100	<100	NC
Vinyl chloride	<100	<100	NC
Xylenes, Total	3800	3700	2.7
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	7.2	7.1	1.4
Gasoline Range Organics (GRO)	130	130	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	11	11	0.0
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	2.6	2.5	3.9
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	4.6	4.8	4.3
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	17	14	19.4
2,2-Dichloropropane	<2	<2	NC
2-Butanone	12	13	8.0
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	12	10	18.2
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	3.7	3.6	2.7
4-Methyl-2-pentanone	2.9 J	2.6 J	NC
Acetone	46	44	4.4
Benzene	11	11	0.0
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	1.8	1.9	5.4
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	0.71 J	0.77 J	NC
Methyl tert-butyl ether (MTBE)	4.3	4.2	2.4
Methylene Chloride	<3	<3	NC
Naphthalene	30	29	3.4
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	0.93 J	0.94 J	NC
sec-Butylbenzene	0.32 J	0.32 J	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	0.7 J	0.7 J	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	32	33	3.1
E504.1 (ug/L)			
1,2-Dibromoethane	0.18	0.2	10.5
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	64	68	6.1
Gasoline Range Organics (GRO)	0.21	0.21	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<100	<10	NC
1,2-Dichlorobenzene	<100	<10	NC
1,3-Dichlorobenzene	<100	<10	NC
1,4-Dichlorobenzene	<100	<10	NC
1-Methylnaphthalene	200	32	**144.8**
2,4,5-Trichlorophenol	<100	<10	NC
2,4,6-Trichlorophenol	<100	<10	NC
2,4-Dichlorophenol	<200	<20	NC
2,4-Dimethylphenol	<100	<10	NC
2,4-Dinitrophenol	<200	<20	NC
2,4-Dinitrotoluene	<100	<10	NC
2,6-Dinitrotoluene	<100	<10	NC
2-Chloronaphthalene	<100	<10	NC
2-Chlorophenol	<100	<10	NC
2-Methylnaphthalene	300	23	**171.5**
2-Methylphenol	<100	<10	NC
2-Nitroaniline	<100	<10	NC
2-Nitrophenol	<100	<10	NC
3,3´-Dichlorobenzidine	<100	<10	NC
3+4-Methylphenol	<100	<10	NC
3-Nitroaniline	<100	<10	NC
4,6-Dinitro-2-methylphenol	<200	<20	NC
4-Bromophenyl phenyl ether	<100	<10	NC
4-Chloro-3-methylphenol	<100	<10	NC
4-Chloroaniline	<100	<10	NC
4-Chlorophenyl phenyl ether	<100	<10	NC
4-Nitroaniline	<100	<10	NC
4-Nitrophenol	<100	<10	NC
Acenaphthene	<100	<10	NC
Acenaphthylene	<100	<10	NC
Aniline	<100	<10	NC
Anthracene	<100	<10	NC
Azobenzene	<100	<10	NC
Benz(a)anthracene	<100	<10	NC
Benzo(a)pyrene	<100	<10	NC
Benzo(b)fluoranthene	<100	<10	NC
Benzo(g,h,i)perylene	<100	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<100	<10	NC
Benzoic acid	91 J	8.7 J	NC
Benzyl alcohol	<100	<10	NC
Bis(2-chloroethoxy)methane	<100	<10	NC
Bis(2-chloroethyl)ether	<100	<10	NC
Bis(2-chloroisopropyl)ether	<100	<10	NC
Bis(2-ethylhexyl)phthalate	<100	<10	NC
Butyl benzyl phthalate	<100	<10	NC
Carbazole	<100	<10	NC
Chrysene	<100	<10	NC
Dibenz(a,h)anthracene	<100	<10	NC
Dibenzofuran	<100	<10	NC
Diethyl phthalate	<100	<10	NC
Dimethyl phthalate	<100	<10	NC
Di-n-butyl phthalate	<100	<10	NC
Di-n-octyl phthalate	<100	<10	NC
Fluoranthene	<100	<10	NC
Fluorene	<100	<10	NC
Hexachlorobenzene	<100	<10	NC
Hexachlorobutadiene	<100	<10	NC
Hexachlorocyclopentadiene	<100	<10	NC
Hexachloroethane	<100	<10	NC
Indeno(1,2,3-cd)pyrene	<100	<10	NC
Isophorone	<100	<10	NC
Naphthalene	<100	<10	NC
Nitrobenzene	<100	<10	NC
N-Nitrosodimethylamine	<100	<10	NC
N-Nitrosodi-n-propylamine	<100	<10	NC
N-Nitrosodiphenylamine	<100	<10	NC
Pentachlorophenol	<200	<20	NC
Phenanthrene	<100	<10	NC
Phenol	<100	<10	NC
Pyrene	<100	<10	NC
Pyridine	<100	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.6	1.7	6.1
Chloride	1000	1000	0.0
Fluoride	0.94	0.93	1.1
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	98	98	0.0
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.064	0.062	3.2
Cadmium	<0.002	<0.002	NC
Calcium	23	22	4.4
Chromium	<0.006	<0.006	NC
Copper	0.0051 J	0.0033 J	NC
Iron	0.11	0.088	22.2
Lead	<0.0025	<0.0025	NC
Magnesium	2.7	2.5	7.7
Manganese	0.14	0.12	15.4
Mercury	0.000072 J	0.000075 J	NC
Potassium	1.5	1.5	0.0
Selenium	<0.005	<0.005	NC
Silver	<0.005	<0.005	NC
Sodium	750	790	5.2
Uranium	0.011	0.012	8.7
Zinc	0.0088 J	0.0062 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-42	DUP08	RPD %
	1808I45-003	1808I45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0019	0.0017	11.1
Barium	0.074	0.075	1.3
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.0041 J	0.0044 J	NC
Iron	0.47	0.45	4.3
Lead	0.00057	0.00056	1.8
Manganese	0.15	0.14	6.9
Mercury	0.000074 J	0.000076 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.01	0.011	9.5
Zinc	0.006 J	0.0085 J	**34.5**

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

34.5

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<2	<1	NC
1,1,1-Trichloroethane	<2	<1	NC
1,1,2,2-Tetrachloroethane	<4	<2	NC
1,1,2-Trichloroethane	<2	<1	NC
1,1-Dichloroethane	<2	<1	NC
1,1-Dichloroethene	<2	<1	NC
1,1-Dichloropropene	<2	<1	NC
1,2,3-Trichlorobenzene	<2	<1	NC
1,2,3-Trichloropropane	<4	<2	NC
1,2,4-Trichlorobenzene	<2	<1	NC
1,2,4-Trimethylbenzene	<2	<1	NC
1,2-Dibromo-3-chloropropane	<4	<2	NC
1,2-Dibromoethane (EDB)	<2	<1	NC
1,2-Dichlorobenzene	<2	<1	NC
1,2-Dichloroethane (EDC)	<2	<1	NC
1,2-Dichloropropane	<2	<1	NC
1,3,5-Trimethylbenzene	<2	<1	NC
1,3-Dichlorobenzene	<2	<1	NC
1,3-Dichloropropane	<2	<1	NC
1,4-Dichlorobenzene	<2	<1	NC
1-Methylnaphthalene	<8	<4	NC
2,2-Dichloropropane	<4	<2	NC
2-Butanone	<20	<10	NC
2-Chlorotoluene	<2	<1	NC
2-Hexanone	<20	<10	NC
2-Methylnaphthalene	<8	<4	NC
4-Chlorotoluene	<2	<1	NC
4-Isopropyltoluene	<2	<1	NC
4-Methyl-2-pentanone	<20	<10	NC
Acetone	<20	1.7 J	NC
Benzene	<2	<1	NC
Bromobenzene	<2	<1	NC
Bromodichloromethane	<2	<1	NC
Bromoform	<2	<1	NC
Bromomethane	<6	<3	NC
Carbon disulfide	<20	<10	NC
Carbon Tetrachloride	<2	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<2	<1	NC
Chloroethane	<4	<2	NC
Chloroform	<2	<1	NC
Chloromethane	<6	<3	NC
cis-1,2-DCE	<2	<1	NC
cis-1,3-Dichloropropene	<2	<1	NC
Dibromochloromethane	<2	<1	NC
Dibromomethane	<2	<1	NC
Dichlorodifluoromethane	<2	<1	NC
Ethylbenzene	<2	<1	NC
Hexachlorobutadiene	<2	<1	NC
Isopropylbenzene	<2	<1	NC
Methyl tert-butyl ether (MTBE)	580	530	9.0
Methylene Chloride	<6	<3	NC
Naphthalene	<4	<2	NC
n-Butylbenzene	<6	<3	NC
n-Propylbenzene	<2	<1	NC
sec-Butylbenzene	<2	<1	NC
Styrene	<2	<1	NC
tert-Butylbenzene	<2	<1	NC
Tetrachloroethene (PCE)	<2	<1	NC
Toluene	<2	<1	NC
trans-1,2-DCE	<2	<1	NC
trans-1,3-Dichloropropene	<2	<1	NC
Trichloroethene (TCE)	<2	<1	NC
Trichlorofluoromethane	<2	<1	NC
Vinyl chloride	<2	<1	NC
Xylenes, Total	<3	<1.5	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0092	<0.0093	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.3	1.8	**32.3**
Gasoline Range Organics (GRO)	0.49	0.48	2.1
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	6.9 J	7.5 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	14	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.6	0.59	1.7
Chloride	93	95	2.1
Fluoride	0.22 J	0.21 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	230	250	8.3
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00075 J	0.00072 J	NC
Barium	0.045	0.046	2.2
Cadmium	<0.002	<0.002	NC
Calcium	72	69	4.3
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	16	16	0.0
Manganese	0.16	0.16	0.0
Potassium	1.3	1.1	16.7
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	290	280	3.5
Uranium	0.031	0.031	0.0
Zinc	0.01	0.012	18.2

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUP09	RPD %
	1808J13-005	1808J13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0012	0.0012	0.0
Barium	0.12	0.12	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0018 J	NC
Copper	<0.006	<0.006	NC
Iron	3.1	3.3	6.2
Lead	0.0019	0.002	5.1
Manganese	0.42	0.45	6.9
Mercury	0.000047 J	0.000057 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0013 J	0.0019 J	NC
Uranium	0.032	0.032	0.0
Zinc	0.0091 J	0.0095 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **32.3**

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<20	<20	NC
1,1,1-Trichloroethane	<20	<20	NC
1,1,2,2-Tetrachloroethane	<40	<40	NC
1,1,2-Trichloroethane	<20	<20	NC
1,1-Dichloroethane	<20	<20	NC
1,1-Dichloroethene	<20	<20	NC
1,1-Dichloropropene	<20	<20	NC
1,2,3-Trichlorobenzene	<20	<20	NC
1,2,3-Trichloropropane	<40	<40	NC
1,2,4-Trichlorobenzene	<20	<20	NC
1,2,4-Trimethylbenzene	370	410	10.3
1,2-Dibromo-3-chloropropane	<40	<40	NC
1,2-Dibromoethane (EDB)	<20	<20	NC
1,2-Dichlorobenzene	<20	<20	NC
1,2-Dichloroethane (EDC)	<20	<20	NC
1,2-Dichloropropane	<20	<20	NC
1,3,5-Trimethylbenzene	100	110	9.5
1,3-Dichlorobenzene	<20	<20	NC
1,3-Dichloropropane	<20	<20	NC
1,4-Dichlorobenzene	<20	<20	NC
1-Methylnaphthalene	12 J	11 J	NC
2,2-Dichloropropane	<40	<40	NC
2-Butanone	<200	<200	NC
2-Chlorotoluene	<20	<20	NC
2-Hexanone	<200	<200	NC
2-Methylnaphthalene	12 J	12 J	NC
4-Chlorotoluene	<20	<20	NC
4-Isopropyltoluene	<20	<20	NC
4-Methyl-2-pentanone	18 J	16 J	NC
Acetone	72 J	62 J	NC
Benzene	5900	5900	0.0
Bromobenzene	<20	<20	NC
Bromodichloromethane	<20	<20	NC
Bromoform	<20	<20	NC
Bromomethane	<60	<60	NC
Carbon disulfide	<200	<200	NC
Carbon Tetrachloride	<20	<20	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<20	<20	NC
Chloroethane	<40	<40	NC
Chloroform	<20	<20	NC
Chloromethane	<60	<60	NC
cis-1,2-DCE	<20	<20	NC
cis-1,3-Dichloropropene	<20	<20	NC
Dibromochloromethane	<20	<20	NC
Dibromomethane	<20	<20	NC
Dichlorodifluoromethane	<20	<20	NC
Ethylbenzene	800	810	1.2
Hexachlorobutadiene	<20	<20	NC
Isopropylbenzene	20	21	4.9
Methyl tert-butyl ether (MTBE)	500	480	4.1
Methylene Chloride	<60	<60	NC
Naphthalene	90	92	2.2
n-Butylbenzene	5.3 J	5.2 J	NC
n-Propylbenzene	42	43	2.4
sec-Butylbenzene	<20	<20	NC
Styrene	<20	<20	NC
tert-Butylbenzene	<20	<20	NC
Tetrachloroethene (PCE)	<20	<20	NC
Toluene	13 J	13 J	NC
trans-1,2-DCE	<20	<20	NC
trans-1,3-Dichloropropene	<20	<20	NC
Trichloroethene (TCE)	<20	<20	NC
Trichlorofluoromethane	<20	<20	NC
Vinyl chloride	<20	<20	NC
Xylenes, Total	990	990	0.0
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	2.9	3.1	6.7
Gasoline Range Organics (GRO)	22	22	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<20	<10	NC
1,2-Dichlorobenzene	<20	<10	NC
1,3-Dichlorobenzene	<20	<10	NC
1,4-Dichlorobenzene	<20	<10	NC
1-Methylnaphthalene	<20	<10	NC
2,4,5-Trichlorophenol	<20	<10	NC
2,4,6-Trichlorophenol	<20	<10	NC
2,4-Dichlorophenol	<40	<20	NC
2,4-Dimethylphenol	<20	<10	NC
2,4-Dinitrophenol	<40	<20	NC
2,4-Dinitrotoluene	<20	<10	NC
2,6-Dinitrotoluene	<20	<10	NC
2-Chloronaphthalene	<20	<10	NC
2-Chlorophenol	<20	<10	NC
2-Methylnaphthalene	<20	<10	NC
2-Methylphenol	<20	<10	NC
2-Nitroaniline	<20	<10	NC
2-Nitrophenol	<20	<10	NC
3,3´-Dichlorobenzidine	<20	<10	NC
3+4-Methylphenol	16 J	10	NC
3-Nitroaniline	<20	<10	NC
4,6-Dinitro-2-methylphenol	<40	<20	NC
4-Bromophenyl phenyl ether	<20	<10	NC
4-Chloro-3-methylphenol	<20	<10	NC
4-Chloroaniline	<20	<10	NC
4-Chlorophenyl phenyl ether	<20	<10	NC
4-Nitroaniline	<20	<10	NC
4-Nitrophenol	<20	<10	NC
Acenaphthene	<20	<10	NC
Acenaphthylene	<20	<10	NC
Aniline	<20	<10	NC
Anthracene	<20	<10	NC
Azobenzene	<20	<10	NC
Benz(a)anthracene	<20	<10	NC
Benzo(a)pyrene	<20	<10	NC
Benzo(b)fluoranthene	<20	<10	NC
Benzo(g,h,i)perylene	<20	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<20	<10	NC
Benzoic acid	13 J	6.6 J	NC
Benzyl alcohol	<20	<10	NC
Bis(2-chloroethoxy)methane	<20	<10	NC
Bis(2-chloroethyl)ether	<20	<10	NC
Bis(2-chloroisopropyl)ether	<20	<10	NC
Bis(2-ethylhexyl)phthalate	<20	<10	NC
Butyl benzyl phthalate	<20	<10	NC
Carbazole	<20	<10	NC
Chrysene	<20	<10	NC
Dibenz(a,h)anthracene	<20	<10	NC
Dibenzofuran	<20	<10	NC
Diethyl phthalate	<20	<10	NC
Dimethyl phthalate	<20	<10	NC
Di-n-butyl phthalate	<20	<10	NC
Di-n-octyl phthalate	<20	<10	NC
Fluoranthene	<20	<10	NC
Fluorene	<20	<10	NC
Hexachlorobenzene	<20	<10	NC
Hexachlorobutadiene	<20	<10	NC
Hexachlorocyclopentadiene	<20	<10	NC
Hexachloroethane	<20	<10	NC
Indeno(1,2,3-cd)pyrene	<20	<10	NC
Isophorone	<20	<10	NC
Naphthalene	<20	5.2 J	NC
Nitrobenzene	<20	<10	NC
N-Nitrosodimethylamine	<20	<10	NC
N-Nitrosodi-n-propylamine	<20	<10	NC
N-Nitrosodiphenylamine	<20	<10	NC
Pentachlorophenol	<40	<20	NC
Phenanthrene	<20	<10	NC
Phenol	<20	<10	NC
Pyrene	<20	<10	NC
Pyridine	<20	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	2	2	0.0
Chloride	330	330	0.0
Fluoride	0.43 J	0.42 J	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	7.1	5.6	23.6
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.02	0.022	9.5
Barium	4.1	4.2	2.4
Cadmium	<0.002	<0.002	NC
Calcium	190	180	5.4
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	16	17	6.1
Lead	<0.0025	<0.0025	NC
Magnesium	29	29	0.0
Manganese	3.6	3.6	0.0
Potassium	21	21	0.0
Selenium	<0.005	<0.005	NC
Silver	0.0023 J	0.0025 J	NC
Sodium	210	200	4.9
Uranium	0.0011 J	0.0012 J	NC
Zinc	0.014	0.017	19.4

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-21	DUP10	RPD %
	1808J13-012	1808J13-013	
	8/31/2018	8/31/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.023	0.023	0.0
Barium	4.1	4.2	2.4
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	18	19	5.4
Lead	0.0014	0.0014	0.0
Manganese	3.7	3.8	2.7
Mercury	0.000042 J	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0024 J	0.0015 J	NC
Uranium	0.002	0.0019	5.1
Zinc	0.015	0.013	14.3

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<10	<10	NC
1,1,1-Trichloroethane	<10	<10	NC
1,1,2,2-Tetrachloroethane	<20	<20	NC
1,1,2-Trichloroethane	<10	<10	NC
1,1-Dichloroethane	7.4 J	7.3 J	NC
1,1-Dichloroethene	7.7 J	8.1 J	NC
1,1-Dichloropropene	<10	<10	NC
1,2,3-Trichlorobenzene	<10	<10	NC
1,2,3-Trichloropropane	<20	<20	NC
1,2,4-Trichlorobenzene	<10	<10	NC
1,2,4-Trimethylbenzene	480	520	8.0
1,2-Dibromo-3-chloropropane	<20	<20	NC
1,2-Dibromoethane (EDB)	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,2-Dichloroethane (EDC)	4.3 J	4 J	NC
1,2-Dichloropropane	<10	<10	NC
1,3,5-Trimethylbenzene	93	100	7.3
1,3-Dichlorobenzene	<10	<10	NC
1,3-Dichloropropane	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	190	180	5.4
2,2-Dichloropropane	<20	<20	NC
2-Butanone	<100	<100	NC
2-Chlorotoluene	<10	<10	NC
2-Hexanone	<100	<100	NC
2-Methylnaphthalene	200	190	5.1
4-Chlorotoluene	<10	<10	NC
4-Isopropyltoluene	4 J	4.2 J	NC
4-Methyl-2-pentanone	<100	<100	NC
Acetone	49 J	8.8 J	NC
Benzene	1100	1100	0.0
Bromobenzene	<10	<10	NC
Bromodichloromethane	<10	<10	NC
Bromoform	<10	<10	NC
Bromomethane	<30	<30	NC
Carbon disulfide	<100	<100	NC
Carbon Tetrachloride	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<10	<10	NC
Chloroethane	<20	<20	NC
Chloroform	<10	<10	NC
Chloromethane	<30	<30	NC
cis-1,2-DCE	8 J	7.2 J	NC
cis-1,3-Dichloropropene	<10	<10	NC
Dibromochloromethane	<10	<10	NC
Dibromomethane	<10	<10	NC
Dichlorodifluoromethane	<10	<10	NC
Ethylbenzene	700	790	12.1
Hexachlorobutadiene	<10	<10	NC
Isopropylbenzene	27	29	7.1
Methyl tert-butyl ether (MTBE)	1800	1700	5.7
Methylene Chloride	<30	<30	NC
Naphthalene	360	340	5.7
n-Butylbenzene	11 J	11 J	NC
n-Propylbenzene	68	69	1.5
sec-Butylbenzene	4.8 J	4.7 J	NC
Styrene	<10	<10	NC
tert-Butylbenzene	<10	<10	NC
Tetrachloroethene (PCE)	<10	<10	NC
Toluene	14	15	6.9
trans-1,2-DCE	<10	<10	NC
trans-1,3-Dichloropropene	<10	<10	NC
Trichloroethene (TCE)	<10	<10	NC
Trichlorofluoromethane	<10	<10	NC
Vinyl chloride	<10	<10	NC
Xylenes, Total	860	900	4.5
E504.1 (ug/L)			
1,2-Dibromoethane	<0.00941	<0.00943	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	4.7	5	6.2
Gasoline Range Organics (GRO)	12	12	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	130	130	0.0
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	7.1 J	6.2 J	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	160	160	0.0
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	19	18	5.4
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	240	260	8.0
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	2.4	2.4	0.0
Chloride	200	200	0.0
Fluoride	1	1	0.0
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	5.5	4.6	17.8
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.011	0.011	0.0
Barium	3.1	3.1	0.0
Cadmium	<0.002	<0.002	NC
Calcium	130	120	8.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	3.2	3.2	0.0
Lead	<0.0005	<0.0005	NC
Magnesium	29	30	3.4
Manganese	1.5	1.5	0.0
Potassium	0.69 J	0.63 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0031 J	0.0029 J	NC
Sodium	330	320	3.1
Uranium	0.0032	0.0029	9.8
Zinc	0.012	0.0098 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.014	0.013	7.4
Barium	2.9	3	3.4
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	5.7	6.2	8.4
Lead	0.00055	0.00055	0.0
Manganese	1.4	1.4	0.0
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0022 J	0.002 J	NC
Uranium	0.0041	0.003	**31.0**
Zinc	0.0054 J	0.0053 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

31.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<50	<50	NC
1,1,1-Trichloroethane	<50	<50	NC
1,1,2,2-Tetrachloroethane	<100	<100	NC
1,1,2-Trichloroethane	<50	<50	NC
1,1-Dichloroethane	<50	<50	NC
1,1-Dichloroethene	<50	<50	NC
1,1-Dichloropropene	<50	<50	NC
1,2,3-Trichlorobenzene	<50	<50	NC
1,2,3-Trichloropropane	<100	<100	NC
1,2,4-Trichlorobenzene	<50	<50	NC
1,2,4-Trimethylbenzene	39 J	31 J	NC
1,2-Dibromo-3-chloropropane	<100	<100	NC
1,2-Dibromoethane (EDB)	<50	<50	NC
1,2-Dichlorobenzene	<50	<50	NC
1,2-Dichloroethane (EDC)	<50	<50	NC
1,2-Dichloropropane	<50	<50	NC
1,3,5-Trimethylbenzene	<50	<50	NC
1,3-Dichlorobenzene	<50	<50	NC
1,3-Dichloropropane	<50	<50	NC
1,4-Dichlorobenzene	<50	<50	NC
1-Methylnaphthalene	350	320	9.0
2,2-Dichloropropane	<100	<100	NC
2-Butanone	<500	<500	NC
2-Chlorotoluene	<50	<50	NC
2-Hexanone	<500	<500	NC
2-Methylnaphthalene	490	450	8.5
4-Chlorotoluene	<50	<50	NC
4-Isopropyltoluene	<50	<50	NC
4-Methyl-2-pentanone	<500	<500	NC
Acetone	<500	<500	NC
Benzene	7400	7700	4.0
Bromobenzene	<50	<50	NC
Bromodichloromethane	<50	<50	NC
Bromoform	<50	<50	NC
Bromomethane	<150	<150	NC
Carbon disulfide	<500	<500	NC
Carbon Tetrachloride	<50	<50	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<50	<50	NC
Chloroethane	<100	<100	NC
Chloroform	<50	<50	NC
Chloromethane	<150	<150	NC
cis-1,2-DCE	<50	<50	NC
cis-1,3-Dichloropropene	<50	<50	NC
Dibromochloromethane	<50	<50	NC
Dibromomethane	<50	<50	NC
Dichlorodifluoromethane	<50	<50	NC
Ethylbenzene	1500	1600	6.5
Hexachlorobutadiene	<50	<50	NC
Isopropylbenzene	36 J	36 J	NC
Methyl tert-butyl ether (MTBE)	1300	1300	0.0
Methylene Chloride	<150	<150	NC
Naphthalene	630	550	13.6
n-Butylbenzene	<150	<150	NC
n-Propylbenzene	80	73	9.2
sec-Butylbenzene	<50	<50	NC
Styrene	<50	<50	NC
tert-Butylbenzene	<50	<50	NC
Tetrachloroethene (PCE)	<50	<50	NC
Toluene	19 J	17 J	NC
trans-1,2-DCE	<50	<50	NC
trans-1,3-Dichloropropene	<50	<50	NC
Trichloroethene (TCE)	<50	<50	NC
Trichlorofluoromethane	<50	<50	NC
Vinyl chloride	<50	<50	NC
Xylenes, Total	110	90	20.0
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0093	<0.0094	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	5.6	5.5	1.8
Gasoline Range Organics (GRO)	25	27	7.7
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	270	210	**25.0**
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	9.2 J	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	410	350	15.8
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	11	8.4 J	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	8.9 J	8.9 J	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	14	11	24.0
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	420	380	10.0
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	10	7.5 J	NC
Phenol	48	42	13.3
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1.2	1.2	0.0
Chloride	190	190	0.0
Fluoride	0.82	0.81	1.2
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	<2.5	<2.5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.015	0.015	0.0
Barium	5.9	5.8	1.7
Cadmium	<0.002	<0.002	NC
Calcium	120	120	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	13	13	0.0
Lead	0.0018	0.0021	15.4
Magnesium	36	35	2.8
Manganese	1.7	1.7	0.0
Potassium	0.91 J	0.94 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0024 J	<0.005	NC
Sodium	200	200	0.0
Uranium	<0.0005	<0.0005	NC
Zinc	0.01	0.0077 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.016	0.015	6.5
Barium	5.8	5.9	1.7
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	12	12	0.0
Lead	0.0064	0.0062	3.2
Manganese	1.6	1.6	0.0
Mercury	0.000038 J	0.000052 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.002 J	<0.005	NC
Uranium	0.00035 J	0.00028 J	NC
Zinc	0.031	0.031	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

25.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	STP-1-NW	DUP13	RPD %
	1809409-003	1809409-005	
	9/6/2018	9/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	8.5
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	1.8 J	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	STP-1-NW	DUP13	RPD %
	1809409-003	1809409-005	
	9/6/2018	9/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	0.99 J	0.96 J	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	STP-1-NW	DUP13	RPD %
	1809409-003	1809409-005	
	9/6/2018	9/6/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	3.7	3.8	2.7
Chloride	1900	1900	0.0
Fluoride	0.47 J	0.44 J	NC
Nitrate+Nitrite as N	23	25	8.3
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	170	170	0.0
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0033 J	0.0031 J	NC
Barium	0.074	0.076	2.7
Cadmium	<0.002	<0.002	NC
Calcium	55	54	1.8
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.027	0.022	20.4
Lead	<0.0025	<0.0025	NC
Magnesium	7.5	7.4	1.3
Manganese	<0.002	<0.002	NC
Mercury	0.00011 J	0.00011 J	NC
Potassium	4.3	4.3	0.0
Selenium	0.0071	0.0069	2.9
Silver	<0.005	<0.005	NC
Sodium	1200	1200	0.0
Uranium	0.044	0.045	2.2
Zinc	0.011	0.011	0.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	STP-1-NW	DUP13	RPD %
	1809409-003	1809409-005	
	9/6/2018	9/6/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0033	0.0033	0.0
Barium	0.091	0.087	4.5
Cadmium	<0.002	<0.002	NC
Chromium	0.0018 J	<0.006	NC
Copper	0.0072	0.0058 J	NC
Iron	0.86	0.75	13.7
Lead	0.00086	0.0006	**35.6**
Manganese	0.027	0.022	20.4
Mercury	0.00017 J	0.00014 J	NC
Selenium	0.0066	0.0068	3.0
Silver	0.0016 J	0.0018 J	NC
Uranium	0.045	0.043	4.5
Zinc	0.016	0.016	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

35.6

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	0.78 J	0.76 J	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	0.56 J	0.56 J	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	3.7 J	3.6 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	30	30	0.0
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.024 J	0.027 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	6.4 J	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1	0.97	3.0
Chloride	1300	1300	0.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	0.08 J	0.077 J	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	1.3 J	1.2 J	NC
Sulfate	220	210	4.7
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.00075 J	0.00075 J	NC
Barium	0.094	0.093	1.1
Cadmium	<0.002	<0.002	NC
Calcium	54	54	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.5	0.46	8.3
Lead	<0.0005	<0.0005	NC
Magnesium	6.8	6.8	0.0
Manganese	0.034	0.033	3.0
Mercury	0.000081 J	0.00014 J	NC
Potassium	3.3	3.2	3.1
Selenium	0.00093 J	0.0008 J	NC
Silver	<0.005	<0.005	NC
Sodium	1000	990	1.0
Uranium	0.038	0.038	0.0
Zinc	0.0062 J	0.0055 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5C	DUP14	RPD %
	1809583-002	1809583-004	
	9/10/2018	9/10/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	<0.005	NC
Barium	0.094	0.1	6.2
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.87	1.1	23.4
Lead	<0.0025	<0.0025	NC
Manganese	0.037	0.04	7.8
Mercury	0.00019 J	0.00021	NC
Selenium	<0.005	<0.005	NC
Silver	<0.005	0.0013 J	NC
Uranium	0.041	0.041	0.0
Zinc	<0.01	<0.01	0.0

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	8.6 J	2.5 J	NC
Benzene	<1	<1	4.0
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	1.9	1.7	11.1
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	0.17 J	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.00949	<0.00943	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	270	210	**25.0**
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	9.2 J	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	410	350	15.8
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	11	8.4 J	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	8.9 J	8.9 J	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	14	11	24.0
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	420	380	10.0
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	10	7.5 J	NC
Phenol	48	42	13.3
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	<0.5	<0.5	NC
Chloride	110	110	0.0
Fluoride	0.19 J	0.19 J	NC
Nitrate+Nitrite as N	0.28 J	0.48 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	160	160	0.0
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0007 J	0.00071 J	NC
Barium	0.038	0.037	2.7
Cadmium	<0.002	<0.002	NC
Calcium	2.3	2.3	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.017 J	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	0.26 J	0.26 J	NC
Manganese	0.0068	0.0067	1.5
Mercury	0.000081 J	0.000074 J	NC
Potassium	0.76 J	0.69 J	NC
Selenium	0.0023	0.0024	4.3
Silver	<0.005	<0.005	NC
Sodium	370	370	0.0
Uranium	0.033	0.034	3.0
Zinc	0.0072 J	0.011	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	<0.005	0.00094 J	NC
Barium	0.072	0.053	**30.4**
Cadmium	<0.002	<0.002	NC
Chromium	0.024	0.012	**66.7**
Copper	<0.006	<0.006	NC
Iron	2	1.3	**42.4**
Lead	0.0033	0.0015	**75.0**
Manganese	0.11	0.056	**65.1**
Mercury	0.000081 J	0.000068 J	NC
Selenium	<0.005	0.0023	NC
Silver	<0.005	<0.005	NC
Uranium	0.035	0.034	2.9
Zinc	0.022	0.012	**58.8**

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

58.8

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-1C	DUP16	RPD %
	1809856-001	1809856-007	
	9/12/2018	9/12/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1,4-Dioxane	<10	<10	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	4.5 J	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-1C	DUP16	RPD %
	1809856-001	1809856-007	
	9/12/2018	9/12/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-1C	DUP16	RPD %
	1809856-001	1809856-007	
	9/12/2018	9/12/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.16 J	0.17 J	NC
Chloride	33	34	3.0
Fluoride	2.4	2.2	8.7
Nitrate+Nitrite as N	<1	<1	NC
Phosphorus, Orthophosphate (As P)	<2.5	0.85 J	NC
Sulfate	230	240	4.3
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	<0.001	<0.001	NC
Barium	0.017	0.017	0.0
Beryllium	<0.002	<0.002	NC
Cadmium	<0.002	<0.002	NC
Calcium	2.9	2.9	0.0
Chromium	0.0013 J	0.002 J	NC
Copper	<0.006	<0.006	NC
Iron	0.024	0.028	15.4
Lead	<0.0005	<0.0005	NC
Magnesium	0.41 J	0.41 J	NC
Manganese	0.0093	0.0094	1.1
Mercury	<0.0002	<0.0002	NC
Potassium	1	0.93 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	320	310	3.2
Uranium	0.0081	0.0081	0.0
Vanadium	<0.05	<0.05	NC
Zinc	0.0058 J	0.0089 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-1C	DUP16	RPD %
	1809856-001	1809856-007	
	9/12/2018	9/12/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	<0.001	<0.001	NC
Barium	0.037	0.024	**42.6**
Beryllium	<0.002	<0.002	NC
Cadmium	<0.002	<0.002	NC
Chromium	0.0041 J	0.0043 J	NC
Copper	<0.006	<0.006	NC
Iron	0.29	0.22	**27.5**
Lead	0.00077	<0.0005	NC
Manganese	0.038	0.024	**45.2**
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.0081	0.0081	0.0
Vanadium	0.0012 J	0.00083 J	NC
Zinc	<0.01	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

45.2

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1,4-Dioxane	<10	<10	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	6.5 J	8.8 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	<0.5	<0.5	NC
Chloride	16	16	0.0
Fluoride	0.42 J	0.41 J	NC
Nitrogen, Nitrate (As N)	<0.5	0.053 J	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	150	150	0.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	0.00072 J	0.00072 J	NC
Barium	0.021	0.021	0.0
Beryllium	<0.002	0.00032 J	NC
Cadmium	<0.002	<0.002	NC
Calcium	1.9	1.8	5.4
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	<1.	<1.	NC
Manganese	0.0064	0.0062	3.2
Potassium	0.59 J	0.61 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	300	290	3.4
Uranium	0.014	0.014	0.0
Vanadium	<0.05	<0.05	NC
Zinc	0.011	0.0075 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-4	DUP 17	RPD %
	1809884-002	1809884-005	
	9/13/2018	9/13/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7 & E200.8 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	0.00076 J	0.00077 J	NC
Barium	0.02	0.019	5.1
Beryllium	<0.002	<0.002	NC
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Manganese	0.0059	0.0057	3.4
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.014	0.014	0.0
Vanadium	0.00091 J	<0.05	NC
Zinc	<0.01	<0.01	NC
E335.4 (mg/L)			
Cyanide	<0.005	<0.005	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1,4-Dioxane	<10	<10	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	0.99 J	1.3 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	7 J	7 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC
General Chemistry - E300 (mg/L)			
Bromide	<0.5	<0.5	NC
Chloride	63	62	1.6
Fluoride	0.7	0.71	1.4
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	170	170	0.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	0.00093 J	0.00095 J	NC
Barium	0.017	0.017	0.0
Beryllium	<0.002	<0.002	NC
Cadmium	<0.002	<0.002	NC
Calcium	1.4	1.4	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	<1	<1	NC
Manganese	0.0039	0.0038	2.6
Mercury	<0.0002	<0.0002	NC
Potassium	0.6 J	0.63 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	260	260	0.0
Uranium	0.0075	0.0075	0.0
Vanadium	<0.05	<0.05	NC
Zinc	0.011	0.0085 J	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MW-5	DUP18	RPD %
	1809A73-002	1809A73-006	
	9/17/2018	9/17/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Antimony	<0.001	<0.001	NC
Arsenic	0.0011	0.0011	0.0
Barium	0.021	0.02	4.9
Beryllium	<0.002	<0.002	NC
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Manganese	0.0045	0.0045	0.0
Mercury	0.000096 J	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.0082	0.0083	1.2
Vanadium	<0.05	<0.05	NC
Zinc	<0.01	<0.01	NC
E335.4 (mg/L)			
Cyanide	<0.01	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-3C	DUP19	RPD %
	1809B69-003	1809B69-006	
	9/18/2018	9/18/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	<1	<1	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	<1	<1	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	1.9 J	1.7 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-3C	DUP19	RPD %
	1809B69-003	1809B69-006	
	9/18/2018	9/18/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	<1	<1	NC
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	1.5	1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC
General Chemistry - E300 (mg/L)			
Bromide	0.18 J	0.16 J	NC
Chloride	38	38	0.0
Fluoride	1.3	1.3	0.0
Nitrogen, Nitrate (As N)	0.061 J	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	0.85 J	0.86 J	NC
Sulfate	320	320	0.0

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-3C	DUP19	RPD %
	1809B69-003	1809B69-006	
	9/18/2018	9/18/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.001	0.0011	9.5
Barium	0.035	0.038	8.2
Cadmium	<0.002	<0.002	NC
Calcium	3.6	3.6	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.15	0.18	18.2
Lead	<0.0005	<0.0005	NC
Magnesium	0.56 J	0.6 J	NC
Manganese	0.021	0.022	4.7
Mercury	0.000044 J	0.000052 J	NC
Potassium	1	1	0.0
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	350	350	0.0
Uranium	0.0011	0.0013	16.7
Zinc	0.0072 J	0.0064 J	NC
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0022 J	0.0022 J	NC
Barium	0.24	0.22	8.7
Cadmium	<0.002	<0.002	NC
Chromium	0.027	0.028	3.6
Copper	<0.006	<0.006	NC
Iron	3.9	3.6	8.0
Lead	0.003	0.0028	6.9
Manganese	0.16	0.16	0.0
Mercury	0.000045 J	0.000058 J	NC
Selenium	<0.005	<0.005	NC
Silver	0.012	0.0059	**68.2**
Uranium	0.0017 J	0.0019 J	NC
Zinc	0.017	0.018	5.7

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

68.2

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP20	RPD %
	1809C83-001	1809C83-006	
	9/19/2018	9/19/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<5	<5	NC
1,1,1-Trichloroethane	<5	<5	NC
1,1,2,2-Tetrachloroethane	<10	<10	NC
1,1,2-Trichloroethane	<5	<5	NC
1,1-Dichloroethane	<5	<5	NC
1,1-Dichloroethene	<5	<5	NC
1,1-Dichloropropene	<5	<5	NC
1,2,3-Trichlorobenzene	<5	<5	NC
1,2,3-Trichloropropane	<10	<10	NC
1,2,4-Trichlorobenzene	<5	<5	NC
1,2,4-Trimethylbenzene	<5	<5	NC
1,2-Dibromo-3-chloropropane	<10	<10	NC
1,2-Dibromoethane (EDB)	<5	<5	NC
1,2-Dichlorobenzene	<5	<5	NC
1,2-Dichloroethane (EDC)	<5	<5	NC
1,2-Dichloropropane	<5	<5	NC
1,3,5-Trimethylbenzene	<5	<5	NC
1,3-Dichlorobenzene	<5	<5	NC
1,3-Dichloropropane	<5	<5	NC
1,4-Dichlorobenzene	<5	<5	NC
1-Methylnaphthalene	<20	<20	NC
2,2-Dichloropropane	<10	<10	NC
2-Butanone	<50	<50	NC
2-Chlorotoluene	<5	<5	NC
2-Hexanone	<50	<50	NC
2-Methylnaphthalene	<20	<20	NC
4-Chlorotoluene	<5	<5	NC
4-Isopropyltoluene	<5	<5	NC
4-Methyl-2-pentanone	<50	<50	NC
Acetone	<50	<50	NC
Benzene	<5	<5	NC
Bromobenzene	<5	<5	NC
Bromodichloromethane	<5	<5	NC
Bromoform	<5	<5	NC
Bromomethane	<15	<15	NC
Carbon disulfide	<50	<50	NC
Carbon Tetrachloride	<5	<5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP20	RPD %
	1809C83-001	1809C83-006	
	9/19/2018	9/19/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<5	<5	NC
Chloroethane	<10	<10	NC
Chloroform	<5	<5	NC
Chloromethane	<15	<15	NC
cis-1,2-DCE	<5	<5	NC
cis-1,3-Dichloropropene	<5	<5	NC
Dibromochloromethane	<5	<5	NC
Dibromomethane	<5	<5	NC
Dichlorodifluoromethane	<5	<5	NC
Ethylbenzene	<5	<5	NC
Hexachlorobutadiene	<5	<5	NC
Isopropylbenzene	<5	<5	NC
Methyl tert-butyl ether (MTBE)	2900	2900	0.0
Methylene Chloride	<15	<15	NC
Naphthalene	<10	<10	NC
n-Butylbenzene	<15	<15	NC
n-Propylbenzene	<5	<5	NC
sec-Butylbenzene	1.2 J	1.3 J	NC
Styrene	<5	<5	NC
tert-Butylbenzene	<5	<5	NC
Tetrachloroethene (PCE)	<5	<5	NC
Toluene	<5	<5	NC
trans-1,2-DCE	<5	<5	NC
trans-1,3-Dichloropropene	<5	<5	NC
Trichloroethene (TCE)	<5	<5	NC
Trichlorofluoromethane	<5	<5	NC
Vinyl chloride	<5	<5	NC
Xylenes, Total	<7.5	<7.5	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP20	RPD %
	1809C83-001	1809C83-006	
	9/19/2018	9/19/2018	
	Sample Result	Field Duplicate	
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0094	<0.0095	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.6	1.4	13.3
Gasoline Range Organics (GRO)	2.8	2.9	3.5
Motor Oil Range Organics (MRO)	<5	<5	NC
General Chemistry - E300 (mg/L)			
Bromide	0.18 J	0.16 J	NC
Chloride	38	38	0.0
Fluoride	1.3	1.3	0.0
Nitrogen, Nitrate (As N)	0.061 J	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	0.85 J	0.86 J	NC
Sulfate	320	320	0.0
Dissolved Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.001	0.0011	9.5
Barium	0.12	0.12	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	0.0067	0.0054 J	NC
Iron	0.06	0.059	1.7
Lead	0.00044 J	0.00045 J	NC
Manganese	0.051	0.052	1.9
Mercury	0.000058 J	0.000042 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Uranium	0.041	0.041	0.0
Zinc	0.0065 J	0.014 v	NC

Table I-3
Field Duplicate Summary - Third Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-30	DUP20	RPD %
	1809C83-001	1809C83-006	
	9/19/2018	9/19/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0013	0.0013	0.0
Barium	0.12	0.13	8.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.067	0.073	8.6
Lead	0.00043 J	0.00044 J	NC
Manganese	0.054	0.055	1.8
Mercury	0.00008 J	0.000052 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0015 J	0.0013 J	**68.2**
Uranium	0.034	0.035	2.9
Zinc	<0.01	0.0034 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

68.2

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<2	<2	NC
1,1,1-Trichloroethane	<2	<2	NC
1,1,2,2-Tetrachloroethane	<4	<4	NC
1,1,2-Trichloroethane	<2	<2	NC
1,1-Dichloroethane	<2	<2	NC
1,1-Dichloroethene	<2	<2	NC
1,1-Dichloropropene	<2	<2	NC
1,2,3-Trichlorobenzene	<2	<2	NC
1,2,3-Trichloropropane	<4	<4	NC
1,2,4-Trichlorobenzene	<2	<2	NC
1,2,4-Trimethylbenzene	<2	<2	NC
1,2-Dibromo-3-chloropropane	<4	<4	NC
1,2-Dibromoethane (EDB)	<2	<2	NC
1,2-Dichlorobenzene	<2	<2	NC
1,2-Dichloroethane (EDC)	<2	<2	NC
1,2-Dichloropropane	<2	<2	NC
1,3,5-Trimethylbenzene	<2	<2	NC
1,3-Dichlorobenzene	<2	<2	NC
1,3-Dichloropropane	<2	<2	NC
1,4-Dichlorobenzene	<2	<2	NC
1-Methylnaphthalene	<8	<8	NC
2,2-Dichloropropane	<4	<4	NC
2-Butanone	<20	<20	NC
2-Chlorotoluene	<2	<2	NC
2-Hexanone	<20	<20	NC
2-Methylnaphthalene	<8	<8	NC
4-Chlorotoluene	<2	<2	NC
4-Isopropyltoluene	<2	<2	NC
4-Methyl-2-pentanone	<20	<20	NC
Acetone	3.7 J	4.3 J	NC
Benzene	<2	<2	NC
Bromobenzene	<2	<2	NC
Bromodichloromethane	<2	<2	NC
Bromoform	<2	<2	NC
Bromomethane	<6	<6	NC
Carbon disulfide	<20	<20	NC
Carbon Tetrachloride	<2	<2	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<2	<2	NC
Chloroethane	<4	<4	NC
Chloroform	<2	<2	NC
Chloromethane	<6	<6	NC
cis-1,2-DCE	<2	<2	NC
cis-1,3-Dichloropropene	<2	<2	NC
Dibromochloromethane	<2	<2	NC
Dibromomethane	<2	<2	NC
Dichlorodifluoromethane	<2	<2	NC
Ethylbenzene	<2	<2	NC
Hexachlorobutadiene	<2	<2	NC
Isopropylbenzene	<2	<2	NC
Methyl tert-butyl ether (MTBE)	7.7	8	3.8
Methylene Chloride	1.8 J	<6	NC
Naphthalene	<4	<4	NC
n-Butylbenzene	<6	<6	NC
n-Propylbenzene	<2	<2	NC
sec-Butylbenzene	<2	<2	NC
Styrene	<2	<2	NC
tert-Butylbenzene	<2	<2	NC
Tetrachloroethene (PCE)	<2	<2	NC
Toluene	<2	<2	NC
trans-1,2-DCE	<2	<2	NC
trans-1,3-Dichloropropene	<2	<2	NC
Trichloroethene (TCE)	<2	<2	NC
Trichlorofluoromethane	<2	<2	NC
Vinyl chloride	<2	<2	NC
Xylenes, Total	<3	<3	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.23	0.15	**42.1**
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	17 J	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	8.9 J	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	3	2.9	3.4
Chloride	2100	1900	10.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<2	<2	NC
Phosphorus, Orthophosphate (As P)	<10	<10	NC
Sulfate	2700	2500	7.7
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0049	0.0049	0.0
Barium	0.011	0.011	0.0
Cadmium	<0.002	<0.002	NC
Calcium	210	210	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.02 J	0.02 J	NC
Lead	<0.001	<0.001	NC
Magnesium	62	62	0.0
Manganese	0.038	0.029	**26.9**
Potassium	0.95 J	0.9 J	NC
Selenium	0.00094 J	0.001	NC
Silver	0.0051	0.0053	3.8
Sodium	2400	2500	4.1
Uranium	0.15	0.14	6.9
Zinc	0.02	0.013	**42.4**

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0074	0.0073	1.4
Barium	0.058	0.05	14.8
Cadmium	<0.002	<0.002	NC
Chromium	0.0019 J	0.002 J	NC
Copper	<0.006	<0.006	NC
Iron	1.6	1.6	0.0
Lead	0.0014	0.0011	24.0
Manganese	0.12	0.092	**26.4**
Mercury	<0.0002	<0.0002	NC
Selenium	<0.005	0.0017	NC
Silver	0.0068	0.0069	1.5
Uranium	0.14	0.14	0.0
Zinc	0.0078 J	0.005 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

26.4

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-10	Duplicate	RPD %
	1811496-009	1811496-010	
	11/8/2018	11/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	1.2	1.2	0.0
1,1-Dichloroethene	0.98 J	0.91 J	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	0.63 J	0.61 J	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-10	Duplicate	RPD %
	1811496-009	1811496-010	
	11/8/2018	11/8/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	15	15	0.0
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
E504.1 (ug/L)			
1,2-Dibromoethane	<0.0095	<0.0096	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-10	Duplicate	RPD %
	1811496-009	1811496-010	
	11/8/2018	11/8/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	1	1	0.0
Chloride	860	730	16.4
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	0.94	1	6.2
Nitrogen, Nitrite (As N)	0.23 J	0.16 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	220	210	4.7
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00083 J	0.00083 J	NC
Barium	0.053	0.052	1.9
Cadmium	<0.002	<0.002	NC
Calcium	77	77	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	14	13	7.4
Manganese	0.061	0.06	1.7
Potassium	1.5	1.4	6.9
Selenium	0.01	0.01	0.0
Silver	0.0023 J	0.0021 J	NC
Sodium	670	620	7.8
Uranium	0.053	0.053	0.0
Zinc	0.015	0.013	14.3

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-10	Duplicate	RPD %
	1811496-009	1811496-010	
	11/8/2018	11/8/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0017	0.0016	6.1
Barium	0.053	0.053	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.028	0.036	**25.0**
Lead	<0.0005	<0.0005	NC
Manganese	0.064	0.062	3.2
Mercury	0.000079 J	0.000068 J	NC
Selenium	0.011	0.011	0.0
Silver	0.0026 J	0.0026 J	NC
Uranium	0.048	0.047	2.1
Zinc	<0.01	<0.01	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25. **25.0**

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	<1	<1	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	<1	<1	NC
1,1-Dichloroethane	0.37 J	0.37 J	NC
1,1-Dichloroethene	<1	<1	NC
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	0.36 J	0.36 J	NC
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	2.4 J	2.8 J	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	<1	<1	NC
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	5	5.2	3.9
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	<1	<1	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	<1	<1	NC
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	<0.05	<0.05	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	16	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.61	0.65	6.3
Chloride	390	330	16.7
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	94	93	1.1
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0014	0.0016	1.3
Barium	0.11	0.1	9.5
Cadmium	<0.002	<0.002	NC
Calcium	4.4	4.3	2.3
Chromium	<0.006	0.0014 J	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	0.037	NC
Lead	<0.0005	<0.0005	NC
Magnesium	0.43 J	0.43 J	NC
Manganese	0.0088	0.008	9.5
Potassium	0.99 J	1.1	NC
Selenium	0.0012	0.0013	8.0
Silver	<0.005	<0.005	NC
Sodium	430	440	2.3
Uranium	0.031	0.032	3.2
Zinc	0.021	0.022	4.7

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.0017	0.002	16.2
Barium	0.14	0.14	0.0
Cadmium	<0.002	<0.002	NC
Chromium	0.0034 J	0.0075	NC
Copper	<0.006	<0.006	NC
Iron	0.7	1.3	**60.0**
Lead	0.00036 J	0.00051	NC
Manganese	0.023	0.034	**38.6**
Selenium	0.0017	0.0017	0.0
Silver	<0.005	0.0025 J	NC
Uranium	0.027	0.029	7.1
Zinc	0.0037 J	0.0052 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

38.6

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<1	<1	NC
1,1,1-Trichloroethane	0.8 J	0.72 J	NC
1,1,2,2-Tetrachloroethane	<2	<2	NC
1,1,2-Trichloroethane	0.41 J	0.36 J	NC
1,1-Dichloroethane	65	54	18.5
1,1-Dichloroethene	5.1	4.5	12.5
1,1-Dichloropropene	<1	<1	NC
1,2,3-Trichlorobenzene	<1	<1	NC
1,2,3-Trichloropropane	<2	<2	NC
1,2,4-Trichlorobenzene	<1	<1	NC
1,2,4-Trimethylbenzene	<1	<1	NC
1,2-Dibromo-3-chloropropane	<2	<2	NC
1,2-Dibromoethane (EDB)	<1	<1	NC
1,2-Dichlorobenzene	<1	<1	NC
1,2-Dichloroethane (EDC)	3	2.5	18.2
1,2-Dichloropropane	<1	<1	NC
1,3,5-Trimethylbenzene	<1	<1	NC
1,3-Dichlorobenzene	<1	<1	NC
1,3-Dichloropropane	<1	<1	NC
1,4-Dichlorobenzene	<1	<1	NC
1-Methylnaphthalene	<4	<4	NC
2,2-Dichloropropane	<2	<2	NC
2-Butanone	<10	<10	NC
2-Chlorotoluene	<1	<1	NC
2-Hexanone	<10	<10	NC
2-Methylnaphthalene	<4	<4	NC
4-Chlorotoluene	<1	<1	NC
4-Isopropyltoluene	<1	<1	NC
4-Methyl-2-pentanone	<10	<10	NC
Acetone	<10	<10	NC
Benzene	<1	<1	NC
Bromobenzene	<1	<1	NC
Bromodichloromethane	<1	<1	NC
Bromoform	<1	<1	NC
Bromomethane	<3	<3	NC
Carbon disulfide	<10	<10	NC
Carbon Tetrachloride	<1	<1	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<1	<1	NC
Chloroethane	<2	<2	NC
Chloroform	<1	<1	NC
Chloromethane	<3	<3	NC
cis-1,2-DCE	5.3	4.6	14.1
cis-1,3-Dichloropropene	<1	<1	NC
Dibromochloromethane	<1	<1	NC
Dibromomethane	<1	<1	NC
Dichlorodifluoromethane	<1	<1	NC
Ethylbenzene	<1	<1	NC
Hexachlorobutadiene	<1	<1	NC
Isopropylbenzene	<1	<1	NC
Methyl tert-butyl ether (MTBE)	2.1	1.6	**27.0**
Methylene Chloride	<3	<3	NC
Naphthalene	<2	<2	NC
n-Butylbenzene	<3	<3	NC
n-Propylbenzene	<1	<1	NC
sec-Butylbenzene	<1	<1	NC
Styrene	<1	<1	NC
tert-Butylbenzene	<1	<1	NC
Tetrachloroethene (PCE)	0.17 J	0.16 J	NC
Toluene	<1	<1	NC
trans-1,2-DCE	<1	<1	NC
trans-1,3-Dichloropropene	<1	<1	NC
Trichloroethene (TCE)	3.8	3.2	17.1
Trichlorofluoromethane	<1	<1	NC
Vinyl chloride	<1	<1	NC
Xylenes, Total	<1.5	<1.5	NC
E504.1			
1,2-Dibromoethane	<0.0094	<0.0093	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	<1	<1	NC
Gasoline Range Organics (GRO)	0.04 J	0.041 J	NC
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	<10	<10	NC
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	<10	<10	NC
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	<10	<10	NC
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	<10	<10	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.94	0.94	0.0
Chloride	460	430	6.7
Fluoride	1.2	1.2	0.0
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	490	500	2.0
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00056 J	0.00057 J	NC
Barium	0.03	0.03	0.0
Cadmium	<0.002	<0.002	NC
Calcium	63	64	1.6
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	<0.02	<0.02	NC
Lead	<0.0005	<0.0005	NC
Magnesium	11	12	8.7
Manganese	0.013	0.0061	**72.3**
Potassium	0.27 J	0.27 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	760	780	2.6
Uranium	0.025	0.025	0.0
Zinc	0.035	0.023	**41.4**

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0012	0.0012	0.0
Barium	0.048	0.072	**40.0**
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.75	1.4	**60.5**
Lead	0.00076	0.0014	**59.3**
Manganese	0.19	0.32	**51.0**
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0019 J	0.0019 J	NC
Uranium	0.028	0.029	3.5
Zinc	0.0048 J	0.0068 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

51.0

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<20	<20	NC
1,1,1-Trichloroethane	<20	<20	NC
1,1,2,2-Tetrachloroethane	<40	<40	NC
1,1,2-Trichloroethane	<20	<20	NC
1,1-Dichloroethane	<20	<20	NC
1,1-Dichloroethene	5.1 J	5 J	NC
1,1-Dichloropropene	<20	<20	NC
1,2,3-Trichlorobenzene	<20	<20	NC
1,2,3-Trichloropropane	<40	<40	NC
1,2,4-Trichlorobenzene	<20	<20	NC
1,2,4-Trimethylbenzene	1100	1100	0.0
1,2-Dibromo-3-chloropropane	<40	<40	NC
1,2-Dibromoethane (EDB)	<20	<20	NC
1,2-Dichlorobenzene	<20	<20	NC
1,2-Dichloroethane (EDC)	<20	<20	NC
1,2-Dichloropropane	<20	<20	NC
1,3,5-Trimethylbenzene	250	250	0.0
1,3-Dichlorobenzene	<20	<20	NC
1,3-Dichloropropane	<20	<20	NC
1,4-Dichlorobenzene	<20	<20	NC
1-Methylnaphthalene	68 J	70 J	NC
2,2-Dichloropropane	<40	<40	NC
2-Butanone	<200	<200	NC
2-Chlorotoluene	<20	<20	NC
2-Hexanone	<200	<200	NC
2-Methylnaphthalene	87	85	2.3
4-Chlorotoluene	<20	<20	NC
4-Isopropyltoluene	8.2 J	8.4 J	NC
4-Methyl-2-pentanone	<200	<200	NC
Acetone	<200	<200	NC
Benzene	11000	11000	0.0
Bromobenzene	<20	<20	NC
Bromodichloromethane	<20	<20	NC
Bromoform	<20	<20	NC
Bromomethane	<60	<60	NC
Carbon disulfide	<200	<200	NC
Carbon Tetrachloride	<20	<20	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<20	<20	NC
Chloroethane	73	70	4.2
Chloroform	<20	<20	NC
Chloromethane	<60	<60	NC
cis-1,2-DCE	58	58	0.0
cis-1,3-Dichloropropene	<20	<20	NC
Dibromochloromethane	<20	<20	NC
Dibromomethane	<20	<20	NC
Dichlorodifluoromethane	<20	<20	NC
Ethylbenzene	1900	1800	5.4
Hexachlorobutadiene	<20	<20	NC
Isopropylbenzene	60	58	3.4
Methyl tert-butyl ether (MTBE)	10 J	<20	NC
Methylene Chloride	<60	<60	NC
Naphthalene	230	220	4.4
n-Butylbenzene	14 J	14 J	NC
n-Propylbenzene	140	140	0.0
sec-Butylbenzene	12 J	12 J	NC
Styrene	<20	<20	NC
tert-Butylbenzene	<20	<20	NC
Tetrachloroethene (PCE)	<20	<20	NC
Toluene	1900	1700	11.1
trans-1,2-DCE	<20	<20	NC
trans-1,3-Dichloropropene	<20	<20	NC
Trichloroethene (TCE)	<20	<20	NC
Trichlorofluoromethane	<20	<20	NC
Vinyl chloride	7.4 J	6.9 J	NC
Xylenes, Total	8000	7800	2.5
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	2.8	2.7	3.6
Gasoline Range Organics (GRO)	53	53	0.0
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	34	36	5.7
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	14	17	19.4
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	51	56	9.3
2-Methylphenol	8.5 J	11	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	6.8 J	9 J	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	<20	<20	NC
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	13	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	98	110	11.5
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	28	34	NC
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.66	0.64	3.1
Chloride	320	320	0.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	0.12 J	0.12 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	<2.5	<2.5	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.008	0.008	0.0
Barium	4	4.1	2.5
Cadmium	<0.002	<0.002	NC
Calcium	140	130	7.4
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	6.1	6.2	1.6
Lead	<0.001	<0.001	NC
Magnesium	31	31	0.0
Manganese	2.9	2.9	0
Potassium	0.48 J	0.55 J	NC
Selenium	<0.001	<0.001	NC
Silver	0.0029 J	0.002 J	NC
Sodium	280	280	0.0
Zinc	0.027	0.023	16.0

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-10	Duplicate	RPD %
	1811A96-005	1811A96-008	
	11/20/2018	11/20/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.011	0.011	0.0
Barium	4.3	4.3	0.0
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	8.3	8.8	5.8
Lead	0.0008	0.00087	8.4
Manganese	3	3	0.0
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0035 J	0.0034 J	NC
Zinc	0.0037 J	0.0052 J	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<2	<1	NC
1,1,1-Trichloroethane	<2	<1	NC
1,1,2,2-Tetrachloroethane	<4	<2	NC
1,1,2-Trichloroethane	<2	<1	NC
1,1-Dichloroethane	<2	<1	NC
1,1-Dichloroethene	<2	<1	NC
1,1-Dichloropropene	<2	<1	NC
1,2,3-Trichlorobenzene	<2	<1	NC
1,2,3-Trichloropropane	<4	<2	NC
1,2,4-Trichlorobenzene	<2	<1	NC
1,2,4-Trimethylbenzene	<2	<1	NC
1,2-Dibromo-3-chloropropane	<4	<2	NC
1,2-Dibromoethane (EDB)	<2	<1	NC
1,2-Dichlorobenzene	<2	<1	NC
1,2-Dichloroethane (EDC)	<2	<1	NC
1,2-Dichloropropane	<2	<1	NC
1,3,5-Trimethylbenzene	<2	<1	NC
1,3-Dichlorobenzene	<2	<1	NC
1,3-Dichloropropane	<2	<1	NC
1,4-Dichlorobenzene	<2	<1	NC
1-Methylnaphthalene	<8	<4	NC
2,2-Dichloropropane	<4	<2	NC
2-Butanone	<20	<10	NC
2-Chlorotoluene	<2	<1	NC
2-Hexanone	<20	<10	NC
2-Methylnaphthalene	<8	<4	NC
4-Chlorotoluene	<2	<1	NC
4-Isopropyltoluene	<2	<1	NC
4-Methyl-2-pentanone	<20	<10	NC
Acetone	<20	<10	NC
Benzene	<2	0.25 J	NC
Bromobenzene	<2	<1	NC
Bromodichloromethane	<2	<1	NC
Bromoform	<2	<1	NC
Bromomethane	<6	<3	NC
Carbon disulfide	<20	<10	NC
Carbon Tetrachloride	<2	<1	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<2	<1	NC
Chloroethane	<4	<2	NC
Chloroform	<2	<1	NC
Chloromethane	<6	<3	NC
cis-1,2-DCE	<2	<1	NC
cis-1,3-Dichloropropene	<2	<1	NC
Dibromochloromethane	<2	<1	NC
Dibromomethane	<2	<1	NC
Dichlorodifluoromethane	<2	<1	NC
Ethylbenzene	<2	<1	NC
Hexachlorobutadiene	<2	<1	NC
Isopropylbenzene	<2	<1	NC
Methyl tert-butyl ether (MTBE)	450	290	**43.2**
Methylene Chloride	<6	<3	NC
Naphthalene	<4	<2	NC
n-Butylbenzene	<6	<3	NC
n-Propylbenzene	<2	<1	NC
sec-Butylbenzene	<2	<1	NC
Styrene	<2	<1	NC
tert-Butylbenzene	<2	<1	NC
Tetrachloroethene (PCE)	<2	<1	NC
Toluene	<2	<1	NC
trans-1,2-DCE	<2	<1	NC
trans-1,3-Dichloropropene	<2	<1	NC
Trichloroethene (TCE)	<2	<1	NC
Trichlorofluoromethane	<2	<1	NC
Vinyl chloride	<2	<1	NC
Xylenes, Total	<3	<1.5	NC
E504.1			
1,2-Dibromoethane	<0.0095	<0.0094	NC
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	0.69 J	<1	NC
Gasoline Range Organics (GRO)	0.24	0.2	18.2
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<100	<10	NC
1,2-Dichlorobenzene	<100	<10	NC
1,3-Dichlorobenzene	<100	<10	NC
1,4-Dichlorobenzene	<100	<10	NC
1-Methylnaphthalene	<100	<10	NC
2,4,5-Trichlorophenol	<100	<10	NC
2,4,6-Trichlorophenol	<100	<10	NC
2,4-Dichlorophenol	<200	<20	NC
2,4-Dimethylphenol	<100	<10	NC
2,4-Dinitrophenol	<200	<20	NC
2,4-Dinitrotoluene	<100	<10	NC
2,6-Dinitrotoluene	<100	<10	NC
2-Chloronaphthalene	<100	<10	NC
2-Chlorophenol	<100	<10	NC
2-Methylnaphthalene	<100	<10	NC
2-Methylphenol	<100	<10	NC
2-Nitroaniline	<100	<10	NC
2-Nitrophenol	<100	<10	NC
3,3´-Dichlorobenzidine	<100	<10	NC
3+4-Methylphenol	<100	<10	NC
3-Nitroaniline	<100	<10	NC
4,6-Dinitro-2-methylphenol	<200	<20	NC
4-Bromophenyl phenyl ether	<100	<10	NC
4-Chloro-3-methylphenol	<100	<10	NC
4-Chloroaniline	<100	<10	NC
4-Chlorophenyl phenyl ether	<100	<10	NC
4-Nitroaniline	<100	<10	NC
4-Nitrophenol	<100	<10	NC
Acenaphthene	<100	<10	NC
Acenaphthylene	<100	<10	NC
Aniline	<100	<10	NC
Anthracene	<100	<10	NC
Azobenzene	<100	<10	NC
Benz(a)anthracene	<100	<10	NC
Benzo(a)pyrene	<100	<10	NC
Benzo(b)fluoranthene	<100	<10	NC
Benzo(g,h,i)perylene	<100	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<100	<10	NC
Benzoic acid	<200	<20	NC
Benzyl alcohol	<100	<10	NC
Bis(2-chloroethoxy)methane	<100	<10	NC
Bis(2-chloroethyl)ether	<100	<10	NC
Bis(2-chloroisopropyl)ether	<100	<10	NC
Bis(2-ethylhexyl)phthalate	<100	<10	NC
Butyl benzyl phthalate	<100	<10	NC
Carbazole	<100	<10	NC
Chrysene	<100	<10	NC
Dibenz(a,h)anthracene	<100	<10	NC
Dibenzofuran	<100	<10	NC
Diethyl phthalate	<100	<10	NC
Dimethyl phthalate	<100	<10	NC
Di-n-butyl phthalate	<100	<10	NC
Di-n-octyl phthalate	<100	<10	NC
Fluoranthene	<100	<10	NC
Fluorene	<100	<10	NC
Hexachlorobenzene	<100	<10	NC
Hexachlorobutadiene	<100	<10	NC
Hexachlorocyclopentadiene	<100	<10	NC
Hexachloroethane	<100	<10	NC
Indeno(1,2,3-cd)pyrene	<100	<10	NC
Isophorone	<100	<10	NC
Naphthalene	<100	<10	NC
Nitrobenzene	<100	<10	NC
N-Nitrosodimethylamine	<100	<10	NC
N-Nitrosodi-n-propylamine	<100	<10	NC
N-Nitrosodiphenylamine	<100	<10	NC
Pentachlorophenol	<200	<20	NC
Phenanthrene	<100	<10	NC
Phenol	<100	<10	NC
Pyrene	<100	<10	NC
Pyridine	<100	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	0.64	0.61	1.8
Chloride	97	96	1.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	0.081 J	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	220	230	4.4
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.00049 J	0.00045 J	NC
Barium	0.055	0.056	1.8
Cadmium	<0.002	<0.002	NC
Calcium	80	81	1.2
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	0.03	<0.02	NC
Lead	<0.001	<0.001	NC
Magnesium	17	17	0.0
Manganese	0.28	0.44	**44.4**
Potassium	1.1	0.97 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	<0.005	NC
Sodium	300	300	0.0
Zinc	0.032	0.04	22.2

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.001	0.0011	9.5
Barium	0.13	0.17	**26.7**
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0027 J	NC
Copper	<0.006	<0.006	NC
Iron	2.7	4	**38.8**
Lead	0.0019	0.003	**44.9**
Manganese	0.45	0.59	**26.9**
Selenium	<0.001	<0.001	NC
Silver	0.0024 J	0.0023 J	NC
Zinc	0.007 J	0.014	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

26.9

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
1,1,1,2-Tetrachloroethane	<20	<20	NC
1,1,1-Trichloroethane	<20	<20	NC
1,1,2,2-Tetrachloroethane	<40	<40	NC
1,1,2-Trichloroethane	<20	<20	NC
1,1-Dichloroethane	<20	<20	NC
1,1-Dichloroethene	<20	<20	NC
1,1-Dichloropropene	<20	<20	NC
1,2,3-Trichlorobenzene	<20	<20	NC
1,2,3-Trichloropropane	<40	<40	NC
1,2,4-Trichlorobenzene	<20	<20	NC
1,2,4-Trimethylbenzene	<20	<20	NC
1,2-Dibromo-3-chloropropane	<40	<40	NC
1,2-Dibromoethane (EDB)	<20	<20	NC
1,2-Dichlorobenzene	<20	<20	NC
1,2-Dichloroethane (EDC)	<20	<20	NC
1,2-Dichloropropane	<20	<20	NC
1,3,5-Trimethylbenzene	<20	<20	NC
1,3-Dichlorobenzene	<20	<20	NC
1,3-Dichloropropane	<20	<20	NC
1,4-Dichlorobenzene	<20	<20	NC
1-Methylnaphthalene	82	86	4.8
2,2-Dichloropropane	<40	<40	NC
2-Butanone	<200	<200	NC
2-Chlorotoluene	<20	<20	NC
2-Hexanone	<200	<200	NC
2-Methylnaphthalene	24 J	26 J	NC
4-Chlorotoluene	<20	<20	NC
4-Isopropyltoluene	<20	<20	NC
4-Methyl-2-pentanone	<200	<200	NC
Acetone	<200	<200	NC
Benzene	11000	11000	0.0
Bromobenzene	<20	<20	NC
Bromodichloromethane	<20	<20	NC
Bromoform	<20	<20	NC
Bromomethane	<60	<60	NC
Carbon disulfide	<200	<200	NC
Carbon Tetrachloride	<20	<20	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Chlorobenzene	<20	<20	NC
Chloroethane	<40	<40	NC
Chloroform	<20	<20	NC
Chloromethane	<60	<60	NC
cis-1,2-DCE	<20	<20	NC
cis-1,3-Dichloropropene	<20	<20	NC
Dibromochloromethane	<20	<20	NC
Dibromomethane	<20	<20	NC
Dichlorodifluoromethane	<20	<20	NC
Ethylbenzene	510	520	1.9
Hexachlorobutadiene	<20	<20	NC
Isopropylbenzene	14 J	14 J	NC
Methyl tert-butyl ether (MTBE)	100	97	3.0
Methylene Chloride	<60	<60	NC
Naphthalene	120	120	0.0
n-Butylbenzene	<60	<60	NC
n-Propylbenzene	40	38	5.1
sec-Butylbenzene	<20	<20	NC
Styrene	<20	<20	NC
tert-Butylbenzene	<20	<20	NC
Tetrachloroethene (PCE)	<20	<20	NC
Toluene	61	61	0.0
trans-1,2-DCE	<20	<20	NC
trans-1,3-Dichloropropene	<20	<20	NC
Trichloroethene (TCE)	<20	<20	NC
Trichlorofluoromethane	<20	<20	NC
Vinyl chloride	<20	<20	NC
Xylenes, Total	110	110	0.0
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	8.6	8.2	4.8
Gasoline Range Organics (GRO)	21	20	4.9
Motor Oil Range Organics (MRO)	<5	<5	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NC
1,2-Dichlorobenzene	<10	<10	NC
1,3-Dichlorobenzene	<10	<10	NC
1,4-Dichlorobenzene	<10	<10	NC
1-Methylnaphthalene	54	87	**46.8**
2,4,5-Trichlorophenol	<10	<10	NC
2,4,6-Trichlorophenol	<10	<10	NC
2,4-Dichlorophenol	<20	<20	NC
2,4-Dimethylphenol	<10	<10	NC
2,4-Dinitrophenol	<20	<20	NC
2,4-Dinitrotoluene	<10	<10	NC
2,6-Dinitrotoluene	<10	<10	NC
2-Chloronaphthalene	<10	<10	NC
2-Chlorophenol	<10	<10	NC
2-Methylnaphthalene	13	23	**55.6**
2-Methylphenol	<10	<10	NC
2-Nitroaniline	<10	<10	NC
2-Nitrophenol	<10	<10	NC
3,3´-Dichlorobenzidine	<10	<10	NC
3+4-Methylphenol	<10	<10 J	NC
3-Nitroaniline	<10	<10	NC
4,6-Dinitro-2-methylphenol	<20	<20	NC
4-Bromophenyl phenyl ether	<10	<10	NC
4-Chloro-3-methylphenol	<10	<10	NC
4-Chloroaniline	<10	<10	NC
4-Chlorophenyl phenyl ether	<10	<10	NC
4-Nitroaniline	<10	<10	NC
4-Nitrophenol	<10	<10	NC
Acenaphthene	<10	<10	NC
Acenaphthylene	<10	<10	NC
Aniline	<10	<10	NC
Anthracene	<10	<10	NC
Azobenzene	<10	<10	NC
Benz(a)anthracene	<10	<10	NC
Benzo(a)pyrene	<10	<10	NC
Benzo(b)fluoranthene	<10	<10	NC
Benzo(g,h,i)perylene	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Benzo(k)fluoranthene	<10	<10	NC
Benzoic acid	37	54	**37.4**
Benzyl alcohol	<10	<10	NC
Bis(2-chloroethoxy)methane	<10	<10	NC
Bis(2-chloroethyl)ether	<10	<10	NC
Bis(2-chloroisopropyl)ether	<10	<10	NC
Bis(2-ethylhexyl)phthalate	<10	<10	NC
Butyl benzyl phthalate	<10	<10	NC
Carbazole	<10	<10	NC
Chrysene	<10	<10	NC
Dibenz(a,h)anthracene	<10	<10	NC
Dibenzofuran	<10	<10	NC
Diethyl phthalate	<10	<10	NC
Dimethyl phthalate	<10	<10	NC
Di-n-butyl phthalate	<10	<10	NC
Di-n-octyl phthalate	<10	<10	NC
Fluoranthene	<10	<10	NC
Fluorene	<10	<10	NC
Hexachlorobenzene	<10	<10	NC
Hexachlorobutadiene	<10	<10	NC
Hexachlorocyclopentadiene	<10	<10	NC
Hexachloroethane	<10	<10	NC
Indeno(1,2,3-cd)pyrene	<10	<10	NC
Isophorone	<10	<10	NC
Naphthalene	51	89	**54.3**
Nitrobenzene	<10	<10	NC
N-Nitrosodimethylamine	<10	<10	NC
N-Nitrosodi-n-propylamine	<10	<10	NC
N-Nitrosodiphenylamine	<10	<10	NC
Pentachlorophenol	<20	<20	NC
Phenanthrene	<10	<10	NC
Phenol	24	45	**60.9**
Pyrene	<10	<10	NC
Pyridine	<10	<10	NC

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	2.3	2.3	0.0
Chloride	160	160	0.0
Fluoride	<0.5	<0.5	NC
Nitrogen, Nitrate (As N)	<0.5	<0.5	NC
Nitrogen, Nitrite (As N)	<0.5	<0.5	NC
Phosphorus, Orthophosphate (As P)	<2.5	<2.5	NC
Sulfate	0.77 J	0.92 J	NC
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Arsenic	0.004	0.0041	2.5
Barium	4	3.9	2.5
Cadmium	<0.002	<0.002	NC
Calcium	120	120	0.0
Chromium	<0.006	<0.006	NC
Copper	<0.006	<0.006	NC
Iron	3.4	3.3	3.0
Lead	<0.001	<0.001	NC
Magnesium	18	18	0.0
Manganese	2.3	2.3	0.0
Potassium	0.89 J	0.91 J	NC
Selenium	<0.001	<0.001	NC
Silver	<0.005	0.0021 J	NC
Sodium	290	280	3.5
Zinc	0.018	0.02	10.5

Table I-3
Field Duplicate Summary - Fourth Quarter 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	OW-57	DUPLICATE	RPD %
	1811E76-006	1811E76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0051	0.0056	9.3
Barium	4.7	4.9	4.2
Cadmium	<0.002	<0.002	NC
Chromium	<0.006	0.0021 J	NC
Copper	<0.006	0.0044 J	NC
Iron	6.9	9.3	**29.6**
Lead	0.00088	0.0039	**126.4**
Manganese	2.6	3.2	20.7
Mercury	<0.0002	<0.0002	NC
Selenium	<0.001	<0.001	NC
Silver	0.0035 J	0.0033 J	NC
Zinc	0.0033 J	0.012	NC

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Bolded results are equal to or greater than the RPD of 25.

126.4

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1802570-004	1802570-007	
	2/6/2018	2/6/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	3.9	2.8	**32.8**

Parameter	MKTF-43	DUP03	RPD %
	1802570-008	1802570-012	
	2/7/2018	2/7/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Bromide	4.9	3.8	**25.3**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Silver	0.0096	0.059	**144**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Lead	0.005	0.0088	**55.1**

Parameter	MKTF-33	DUP 04	RPD %
	1802641-002	1802641-006	
	2/8/2018	2/8/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	4	2.8	**35.3**
Lead	0.0037	0.0026	**34.9**

Parameter	NAPIS-2	DUP 05	RPD %
	1802642-002	1802642-006	
	2/9/2018	2/9/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Lead	0.0015	0.002	**28.6**

Parameter	EAST LDU	DUP06	RPD %
	1802819-001	1802819-003	
	2/12/2018	2/12/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Iron	0.041	0.055	**29.2**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-16	DUP08	RPD %
	1802951-001	1802951-006	
	2/15/2018	2/15/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Phenol	62	21	**98.8**

Parameter	MKTF-34	DUP09	RPD %
	1802951-010	1802951-012	
	2/16/2018	2/16/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Arsenic	0.0044	0.002	**75.0**
Barium	0.083	0.058	**35.5**
Iron	2.2	0.98	**76.7**
Lead	0.0023	0.0011	**70.6**
Manganese	0.045	0.02	**76.9**
Mercury	0.00021	0.00045	**72.7**

Parameter	0W-59	DUP11	RPD %
	1802d26-002	1802d26-006	
	2/22/2018	2/22/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.16	0.24	**40.0**
Iron	4.9	7.9	**46.9**
Lead	0.0039 J	0.0065	**50.0**
Manganese	0.19	0.29	**41.7**

Parameter	0W-63	DUP01	RPD %
	1805028-003	1805028-006	
	4/29/2018	4/29/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
2-Butanone	100	41	**83.7**
Acetone	330	120	**93.3**
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	57	76	**28.6**
2,4-Dimethylphenol	13	18	**32.3**
Phenol	17	23	**30.0**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	NAPIS-2	DUP02	RPD %
	1805106-005	1805106-010	
	4/30/2018	4/30/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Ethylbenzene	35	46	**27.2**
n-Propylbenzene	3.7	4.9	**27.9**
sec-Butylbenzene	1.2	1.6	**28.6**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Selenium	0.0049	0.0016	**101.5**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Lead	0.0012	0.00078	**42.4**

Parameter	MKTF-15	DUP04	RPD %
	1805275-001	1805275-008	
	5/2/2018	5/2/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Phenol	660	460	**35.7**

Parameter	MKTF-38	DUP05	RPD %
	1805323-003	1805323-007	
	5/3/2018	5/3/2018	
	Sample Result	Field Duplicate	
General Chemistry - E300 (mg/L)			
Nitrogen, Nitrate (As N)	0.4	0.52	**26.1**

Parameter	MKTF-34	DUP06	RPD %
	1805323-010	1805323-014	
	5/4/2018	5/4/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	0.34	0.06	**140.0**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-25	DUP07	RPD %
	1805416-003	1805416-008	
	5/6/2018	5/6/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Benzene	3400	2600	**26.7**
Ethylbenzene	150	100	**40.0**
n-Propylbenzene	85	62	**31.3**
General Chemistry - E300 (mg/L)			
Bromide	0.23	1.3	**139.9**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Lead	0.0021	0.0027	**25.0**

Parameter	0W-1	DUP12	RPD %
	1805972-002	1805972-006	
	5/15/2018	5/15/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.04	0.061	**41.6**
Iron	0.27	1.8	**147.8**
Manganese	0.018	0.093	**135.1**

Parameter	0W-29	DUP13	RPD %
	1805a27-003	1805a27-004	
	5/16/2018	5/16/2018	
	Sample Result	Field Duplicate	
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.5	2.8	**60.5**

Parameter	MKTF-25	DUP01	RPD %
	1808B32-003	1808B32-006	
	8/17/2018	8/17/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
Phenol	23	34	**38.6**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	12	8.2	**37.6**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-29	DUP02	RPD %
	1808d32-004	1808d32-009	
	8/20/2018	8/20/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Iron	0.053	0.03	**55.4**

Parameter	MKTF-38	DUP03	RPD %
	1808e67-003	1808e67-005	
	8/21/2018	8/21/2018	
	Sample Result	Field Duplicate	
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Iron	0.037	0.071	**63.0**

Parameter	OW-63	DUP04	RPD %
	1808f16-003	1808f16-006	
	8/22/2018	8/22/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Acetone	590	330	**56.5**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Zinc	0.011	0.015	**30.8**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Manganese	1.6	1.2	**28.6**

Parameter	MKTF-37	DUP05	RPD %
	1808f55-001	1808f55-005	
	8/23/2018	8/23/2018	
	Sample Result	Field Duplicate	
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	3	4	**28.6**
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	68	50	**30.5**
2-Methylnaphthalene	84	57	**38.3**
Naphthalene	280	180	**43.5**
Phenol	18	12	**40.0**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	4.8	4.6	**37.6**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-34	DUP06	RPD %
	1808f55-006	1808f55-012	
	8/24/2018	8/24/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.06	0.087	**36.7**
Iron	0.83	2.5	**100.3**
Lead	0.00073	0.0021	**96.8**
Manganese	0.022	0.053	**82.7**
Zinc	0.012	0.023	**62.9**

Parameter	MKTF-42	DUP08	RPD %
	1808i45-003	1808i45-005	
	8/29/2018	8/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	200	32	**144.8**
2-Methylnaphthalene	300	23	**171.5**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Zinc	0.006 J	0.0085 J	**34.5**

Parameter	MKTF-33	DUP09	RPD %
	1808j13-005	1808j13-008	
	8/30/2018	8/30/2018	
	Sample Result	Field Duplicate	
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Diesel Range Organics (DRO)	1.3	1.8	**32.3**

Parameter	MKTF-04	DUP11	RPD %
	1809227-003	1809227-007	
	9/4/2018	9/4/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Uranium	0.0041	0.003	**31.0**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-36	DUP12	RPD %
	1809375-001	1809375-002	
	9/5/2018	9/5/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	270	210	**25.0**

Parameter	STP-1-NW	DUP13	RPD %
	1809409-003	1809409-005	
	9/6/2018	9/6/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Lead	0.00086	0.0006	**35.6**

Parameter	OW-1	DUP15	RPD %
	1809712-001	1809712-007	
	9/11/2018	9/11/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	270	210	**25.0**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.072	0.053	**30.4**
Chromium	0.024	0.012	**66.7**
Iron	2	1.3	**42.4**
Lead	0.0033	0.0015	**75.0**
Manganese	0.11	0.056	**65.1**
Zinc	0.022	0.012	**58.8**

Parameter	BW-1C	DUP16	RPD %
	1809856-001	1809856-007	
	9/12/2018	9/12/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.037	0.024	**42.6**
Iron	0.29	0.22	**27.5**
Manganese	0.038	0.024	**45.2**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	BW-3C	DUP19	RPD %
	1809b69-003	1809b69-006	
	9/18/2018	9/18/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Silver	0.012	0.0059	**68.2**

Parameter	OW-30	DUP20	RPD %
	1809c83-001	1809c83-006	
	9/19/2018	9/19/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Silver	0.0015 J	0.0013 J	**68.2**

Parameter	OW-59	Duplicate	RPD %
	1811442-004	1811442-008	
	11/7/2018	11/7/2018	
	Sample Result	Field Duplicate	
Total Petroleum Hydrocarbons - 8015 (mg/L)			
Gasoline Range Organics (GRO)	0.23	0.15	**42.1**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Manganese	0.038	0.029	**26.9**
Zinc	0.02	0.013	**42.4**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Manganese	0.12	0.092	**26.4**

Parameter	OW-10	Duplicate	RPD %
	1811496-009	1811496-010	
	11/8/2018	11/8/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	0.028	0.036	**25.0**

Parameter	BW-5B	DUPLICATE	RPD %
	1811695-003	1811695-006	
	11/13/2018	11/13/2018	
	Sample Result	Field Duplicate	
Total Metals - E200.7 & E200.8 (mg/L)			
Iron	0.7	1.3	**60.0**
Manganese	0.023	0.034	**38.6**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Parameter	MKTF-30	Duplicate	RPD %
	1811857-013	1811857-014	
	11/15/2018	11/15/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Methyl tert-butyl ether (MTBE)	2.1	1.6	**27.0**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Manganese	0.013	0.0061	**72.3**
Zinc	0.035	0.023	**41.4**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.048	0.072	**40.0**
Iron	0.75	1.4	**60.5**
Lead	0.00076	0.0014	**59.3**
Manganese	0.19	0.32	**51.0**

Parameter	MKTF-33	DUPLICATE	RPD %
	1811D80-009	1811D80-012	
	11/28/2018	11/28/2018	
	Sample Result	Field Duplicate	
Volatile Organic Compounds - 8260B (ug/L)			
Methyl tert-butyl ether (MTBE)	450	290	**43.2**
Dissolved Metals - E200.7 & E200.8 (mg/L)			
Manganese	0.28	0.44	**44.4**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Barium	0.13	0.17	**26.7**
Iron	2.7	4	**38.8**
Lead	0.0019	0.003	**44.9**
Manganese	0.45	0.59	**26.9**

Parameter	OW-57	DUPLICATE	RPD %
	1811e76-006	1811e76-007	
	11/29/2018	11/29/2018	
	Sample Result	Field Duplicate	
Semi-Volatile Organic Compounds - 8270C (ug/L)			
1-Methylnaphthalene	54	87	**46.8**
2-Methylnaphthalene	13	23	**55.6**
Benzoic acid	37	54	**37.4**
Naphthalene	51	89	**54.3**
Phenol	24	45	**60.9**
Total Metals - E200.7, E200.8 & E245.1 (mg/L)			
Iron	6.9	9.3	**29.6**
Lead	0.00088	0.0039	**126.4**

Table I-4
Field Duplicate Exceedances Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

Notes:

RPD = Relative percent difference; [(difference)/(average)]* 100

NC = Not calculated; RPD values were not calculated for non-detects or J-flagged data

ug/L = micrograms per liter

mg/L = milligrams per liter --- = not analyzed

Table I-5
Technical Completeness Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

	Parameter	Total Number of Results				Number of Reported Results	Number of Usable Results	Percent Technical Compliance
		First Quarter	Second Quarter	Third Quarter	Fourth Quarter			
TPH	Diesel Range Organics (DRO)	68	99	123	61	351	351	100
	Motor Oil Range Organics (MRO)	68	99	123	61	351	351	100
	Gasoline Range Organics (GRO)	74	106	113	63	356	356	100
VOCs	All VOC Analytes	80	97	153	74	404	404	100
	EDB	19	27	48	27	121	121	100
SVOCs	All SVOC Analytes	61	75	103	53	292	291	99.66
Total Metals	Antimony	0	0	17	0	17	17	100
	Arsenic	78	94	132	63	367	367	100
	Barium	78	94	132	63	367	367	100
	Beryllium	0	0	17	0	17	17	100
	Cadmium	78	94	132	63	367	367	100
	Chromium	78	94	132	63	367	367	100
	Copper	78	94	132	63	367	367	100
	Iron	78	94	132	63	367	367	100
	Lead	78	94	132	63	367	367	100
	Manganese	78	94	132	63	367	367	100
	Mercury	74	88	127	48	337	337	100
	Selenium	78	94	132	63	367	367	100
	Silver	78	94	132	63	367	367	100
	Uranium	78	94	132	33	337	337	100
	Vanadium	0	0	17	0	17	17	100
	Zinc	78	94	132	63	367	367	100
Dissolved Metals	Antimony	0	0	17	0	17	17	100
	Arsenic	76	94	132	63	365	365	100
	Barium	76	94	132	63	365	365	100
	Beryllium	0	0	17	0	17	17	100
	Cadmium	76	94	132	63	365	365	100
	Calcium	68	86	122	63	339	339	100
	Chromium	76	94	132	63	365	365	100
	Copper	76	94	132	63	365	365	100
	Iron	76	94	132	63	365	365	100
	Lead	76	94	132	63	365	365	100
	Magnesium	68	86	122	58	334	334	100
	Manganese	76	94	132	63	365	365	100
	Mercury	0	0	64	0	64	64	100
	Potassium	68	86	122	58	334	334	100
	Selenium	76	94	132	63	365	365	100
	Silver	76	94	132	63	365	365	100
	Sodium	68	86	122	58	334	334	100
	Uranium	76	94	132	33	335	335	100
	Vanadium	0	0	17	0	17	17	100
	Zinc	76	94	132	63	365	365	100

Table I-5
Technical Completeness Summary - 2018
Annual Ground Water Monitoring Report - 2018
Marathon Petroleum Company - Gallup Refinery

	Parameter	Total Number of Results				Number of Reported Results	Number of Usable Results	Percent Technical Compliance
		First Quarter	Second Quarter	Third Quarter	Fourth Quarter			
Other Parameters	BOD	12	1	11	1	25	25	100
	Bromide	69	86	122	58	335	335	100
	Cyanide	2	1	12	3	18	18	100
	COD	12	1	11	1	25	25	100
	Chloride	69	86	122	58	335	335	100
	Pesticides	0	0	3	0	3	3	100
	e. Coli	11	0	10	0	21	21	100
	Fluoride	69	86	122	58	335	335	100
	Nitrate+Nitrite as N	39	38	49	0	126	126	100
	Nitrogen, Nitrate (As N)	30	48	73	58	209	209	100
	Nitrogen, Nitrite (As N)	30	48	73	58	209	209	100
	pH	0	0	0	2	2	2	100
	Phosphorus, Orthophosphate (As P)	69	86	122	58	335	335	100
	Specific Conductance	0	0	0	2	2	2	100
	Sulfate	69	86	122	58	335	335	100
	Total Dissolved Solids	0	1	1	1	3	3	100

Notes:

Number of samples used in completeness calculations includes field duplicates, equipment rinsate, and field blanks.

Percent Technial Compliance = (Number of usable results / Number of reported results) * 100

APPENDIX J
NEW MONITORING WELL LOGS

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Augers
Sampling Method	: Split Spoon 2'
Comments	:
Total Depth	: 32'
Ground Water	: 18' BGL
Start Date	: 3-13-2018
Finish Date	: 3-13-2018

WELL NO. OW-61

(Sheet 1 of 2)

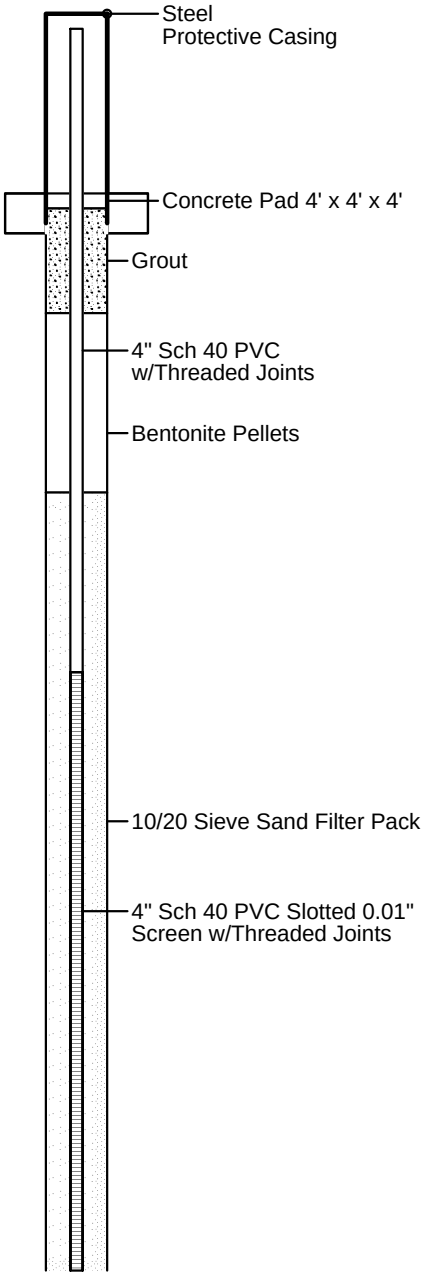
Elev., TOC (ft.msl)	: 6963.57
Elev., PAD (ft. msl)	: 6960.91
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1633887.74
E	: 2546702.36

Saturation
▼ Saturation

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
-2 to 0							
0 to 10					0		Hydroexcavated Location - Borehole open to 10' - no water
10	1563			ML	90		SANDY SILT, very fine, loose, moist, gravel present, brown, strong chemical odor,
12	869			SM	80		GRAVELLY SILTY SAND, fine, loose, moist, 20 mm gravel present, brown, strong odor,
14	1081			SM	70		GRAVELLY SILTY SAND, SIMILAR TO ABOVE (STA), very moist, tan and brown, strong odor,
16	1115	▼		SM	60		GRAVELLY SILTY SAND, STA, increase in gravel, large sandstone gravel in core, moist to very moist,very light tan, strong odor,
18							

Completion Results

OW-61



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Augers
Sampling Method	: Split Spoon 2'
Comments	:
Total Depth	: 32'
Ground Water	: 18' BGL
Start Date	: 3-13-2018
Finish Date	: 3-13-2018

WELL NO. OW-61

(Sheet 2 of 2)

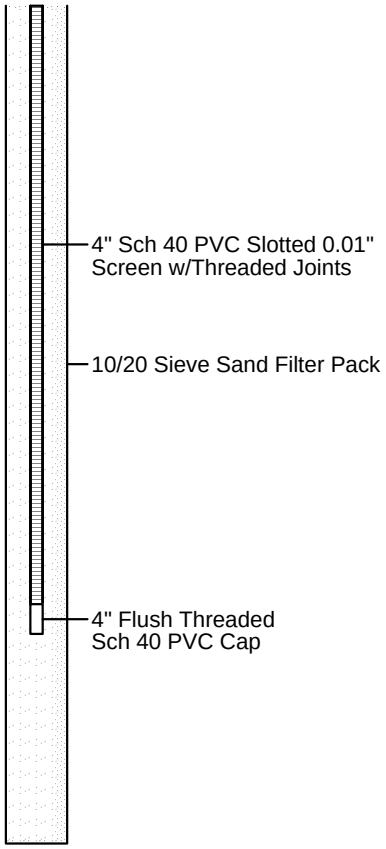
Elev., TOC (ft.msl)	: 6963.57
Elev., PAD (ft. msl)	: 6960.91
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1633887.74
E	: 2546702.36

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
18							
19	1702			SC	20		GRAVELLY CLAYEY SAND, fine to coarse grain sand with brown clay, soft, very damp gravel (10-20 mm), saturated at base,
20							
21	1269			SM	60		SILTY SAND, medium, loose, trace clay and gravel, saturated, dark brown, strong odor,
22				SM	60		SILTY SAND, STA, saturated,
23	1638			CL	60		GRAVELLY SANDY CLAY, low, soft, gravel throughout, damp to saturated in seams, brown, strong odor,
24							
25	1538			CL	50		GRAVELLY CLAY, low, firm, damp, dark blueish grey, strong odor,
26							
27	377			CL	40		GRAVELLY CLAY, STA, trace very fine grain sand, damp,very stiff, odor,
28							
29	298			CL	60		SILTY CLAY, low, very stiff, trace sand and very small gravel, damp, grey to light grey, odor,
30							
31	60.9			CL	70		SILTY CLAY, STA, damp, light grey and pink.
32							
33							
34							
35							
36							
37							
38							

Saturation
▼ Saturation

Completion Results

OW-61



1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Augers
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40'
Ground Water	: Not Encountered
Start Date	: 03/15/2018
Finish Date	: 03/15/2018

WELL NO. OW-62

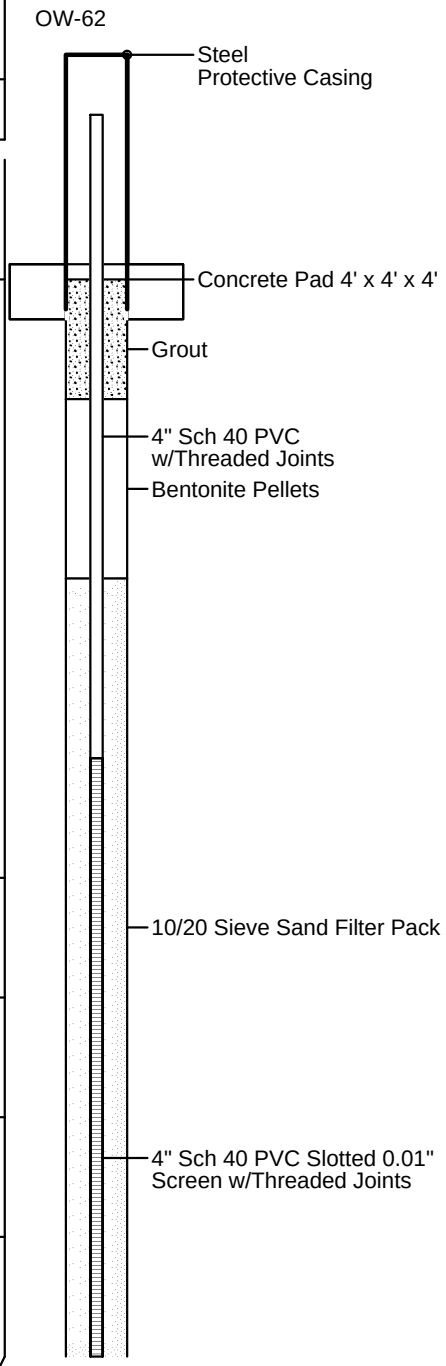
(Sheet 1 of 3)

Elev., TOC (ft.msl)	: 6937.36
Elev., PAD (ft. msl)	: 6934.73
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634866.14
E	: 2545914.00

Saturation
▼ Saturation

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Rec overy (%)	Sample	DESCRIPTION
-2 to 10							Hydroexcavated to 10' - Collapsed to 9' - no fluid,
10 – 11	0			ML	50		CLAYEY SILT, very fine, stiff, dry, crumbly, no odor, light brown,
12 – 13	0.1			CL	50		SILTY CLAY, SIMILAR TO ABOVE (STA), , increase in clay content,
14 – 15	0.3			CL	60		SANDY SILTY CLAY, low, firm, damp, very fine grain sand seams, brown, no odor,
16				CL	80		SANDY CLAY, low, firm, damp,brown, no odor,
17 – 18	0.3			GW	80		SANDY GRAVEL, 20 to10 mm gravel with coarse grain sand, loose, damp,brown, no odor,

Completion Results



1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Augers
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40'
Ground Water	: Not Encountered
Start Date	: 03/15/2018
Finish Date	: 03/15/2018

WELL NO. OW-62

(Sheet 2 of 3)

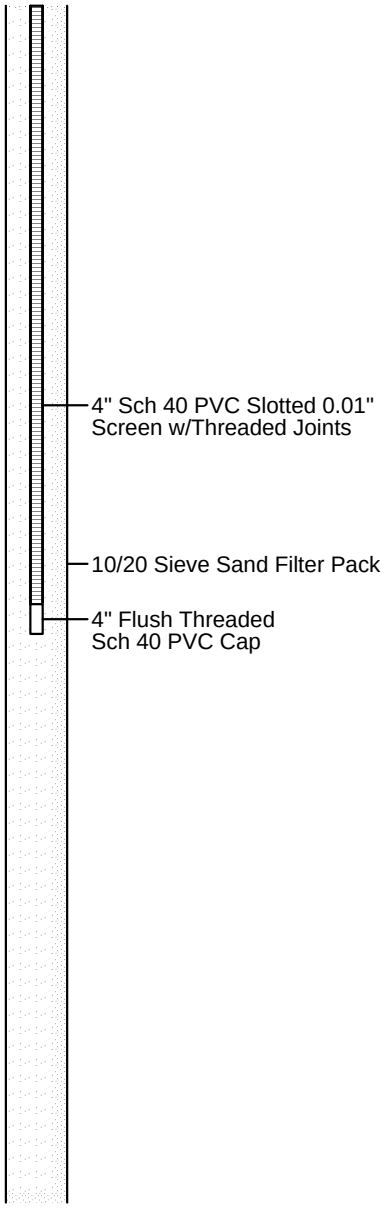
Elev., TOC (ft.msl)	: 6937.36
Elev., PAD (ft. msl)	: 6934.73
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634866.14
E	: 2545914.00

Saturation
▼ Saturation

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Rec overy (%)	Sample	DESCRIPTION
18							
19	3380			GC	80		CLAYEY SANDY GRAVEL, STA except clay present, very moist, hydrocarbon (HC) odor, ,
20							
21	82.9			GC	70		CLAYEY SANDY GRAVEL, STA, damp to moist, HC odor,
22							
23	33			CL	60		SILTY CLAY, low, soft, trace sand,calcareous, damp to moist, reddish brown, HC odor,
24							
25	800			CL	70		SILTY CLAY, low, stiff, damp,reddish brown, HC odor,
26							
27	555			CL	80		SILTY CLAY, STA, calcareous, odor,
28							
29	56			CH	90		CLAY, high, very stiff, damp,reddish brown, faint odor,
30							
31	351			CL	90		SILTY CLAY, low, firm/crumbly, damp,reddish brown, trace grey, no odor,
32							
33	125			CL	90		SILTY CLAY, STA,
34							
35	159			CL	90		SILTY CLAY, STA,
36							
37	91			CL	90		SILTY CLAY, STA,
38							

Completion Results

OW-62



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Augers
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40'
Ground Water	: Not Encountered
Start Date	: 03/15/2018
Finish Date	: 03/15/2018

WELL NO. OW-62

(Sheet 3 of 3)

Elev., TOC (ft.msl)	: 6937.36
Elev., PAD (ft. msl)	: 6934.73
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634866.14
E	: 2545914.00

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Rec overy (%)	Sample	DESCRIPTION
38							
39	44			CL	90		SILTY CLAY, STA.
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							

Saturation
▼ Saturation

Completion Results

OW-62

10/20 Sieve Sand Filter Pack

DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollw-Stem Auger
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 32
Ground Water	: 16'/25'
Start Date	: 03/14/2018
Finish Date	: 03/14/2018

WELL NO. OW-63

(Sheet 1 of 2)

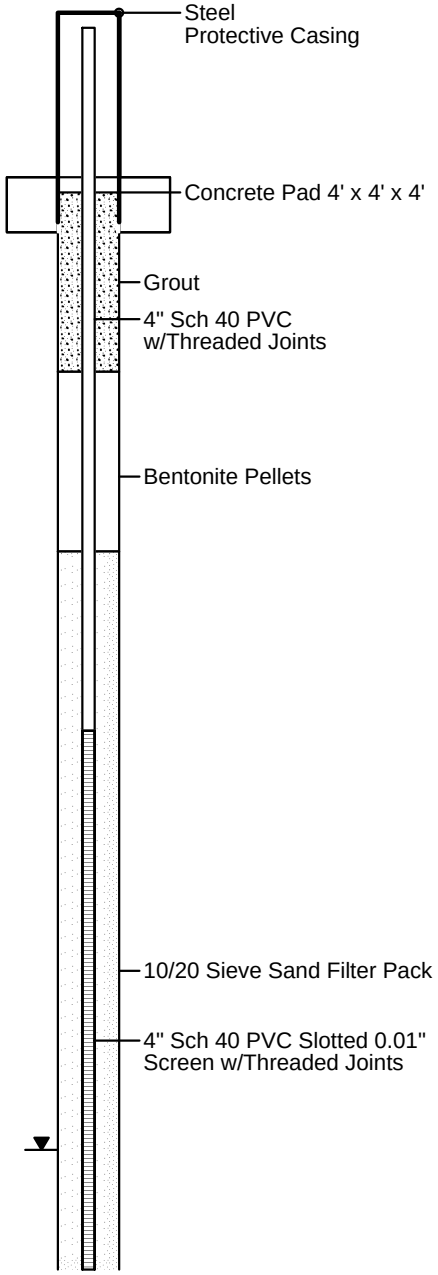
Elev., TOC (ft.msl)	: 6935.06
Elev., PAD (ft. msl)	: 6932.34
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634859.73
E	: 2546756.41

Saturation
▼ Saturation

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
0							Hydroexcavated to 10'-borehole open, no water
10							
11	1.2			CL	90		SILTY CLAY, low, firm, damp,brown with light tan silt in seams,
12							
13	0.9			CL	50		SILTY CLAY, SIMILAR TO ABOVE (STA),
14							
15	1.3			CL	60		SILTY CLAY, STA, trace fine sand in seams,
16		▼					
17	2.5			SM	80		SILTY SAND, fine, compact, very moist to saturated, brown,
18							

Completion Results

OW-63



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollw-Stem Auger
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 32
Ground Water	: 16'/25'
Start Date	: 03/14/2018
Finish Date	: 03/14/2018

WELL NO. OW-63

(Sheet 2 of 2)

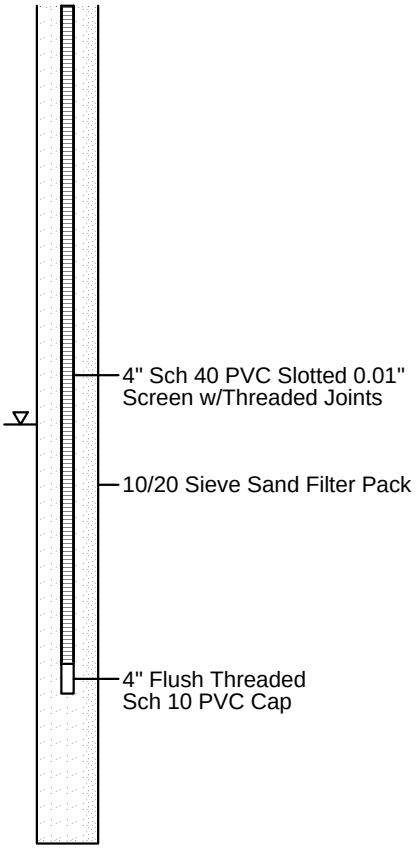
Elev., TOC (ft.msl)	: 6935.06
Elev., PAD (ft. msl)	: 6932.34
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634859.73
E	: 2546756.41

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
18–19	428			CL	80		SANDY SILTY CLAY, low, firm, damp, occasional gravel, brown, odor,
20–21	652			CL	80		SILTY SANDY CLAY, STA, moist in sand seams at base, odor,
22–23	275			CL	70		SILTY SANDY CLAY, STA, odor,
24				CH	70		CLAY, high, soft to firm,damp,brown, odor,
24–25	39			CH	90		CLAY, STA, odor,
25–26	28			GC	90		CLAYEY GRAVEL, sandstone gravel in pink/brown/olive green clay and silt, coarse sand present, saturated, odor,
26–27	150			GC	90		CLAYEY GRAVEL, STA, saturated, odor,
28–29	40				90		WEATHERED SANDSTONE, very dense, dry, grey to light purple, faint odor,
30–31	10.9				50		WEATHERED SANDSTONE, STA, grey and light purple.
32–38							

Saturation
▼ Saturation

Completion Results

OW-63



1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

DiSorbo Consulting, LLC

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Pilot Hole 7 1/4 HSA
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 44' BGL
Ground Water	: Not Encountered
Start Date	: 03/05/2018
Finish Date	: 03/05/2018

WELL NO. OW-64

(Sheet 1 of 3)

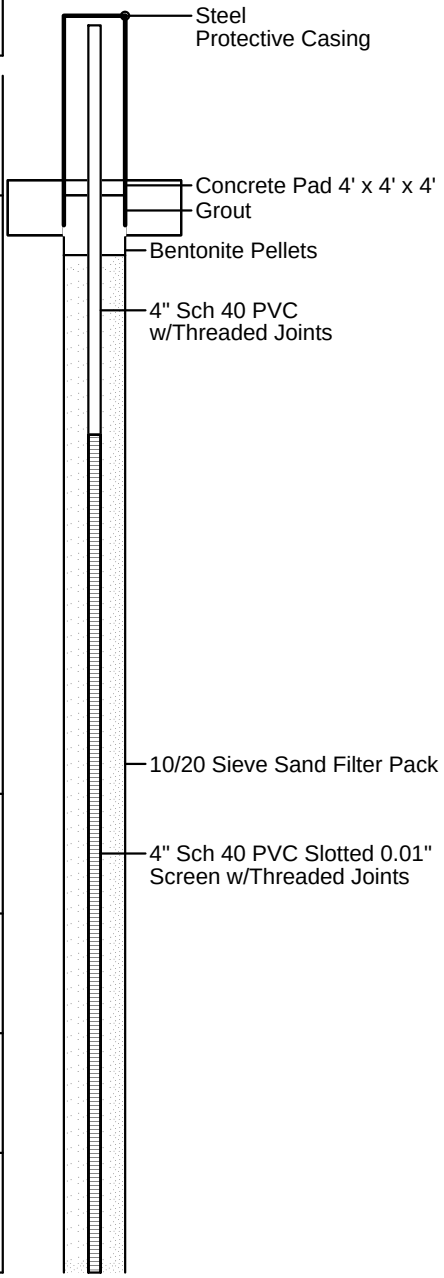
Elev., TOC (ft.msl)	: 6947.40
Elev., PAD (ft. msl)	: 6945.07
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634301.36
E	: 2546150.80

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
-2							
-1							
0							Hydroexcavated to 10' BGL, sloughed to 8' BGL, water in hole at 5.20' BGL, no separate phase hydrocarbon (SPH) detected,
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							SILTY CLAY, low, firm, damp, brown and grey, faint hydrocarbon (HC) odor,
11	280			CL	50		
12							SILTY CLAY, SIMILAR TO ABOVE (STA), faint HC odor,
13	267			CL	70		
14							SILTY CLAY, low to moderate, stiff, calcareous near and at base, damp,brown, grey to greyish white, faint HC odor,
15	308			CL	80		
16							SILTY CLAY, STA, increase in plasticity, mostly grey-trace brown,faint HC ordor,
17	137			CL	50		
18							

Saturation
▼ Saturation

Completion Results

OW-64



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Pilot Hole 7 1/4 HSA
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 44' BGL
Ground Water	: Not Encountered
Start Date	: 03/05/2018
Finish Date	: 03/05/2018

WELL NO. OW-64

(Sheet 2 of 3)

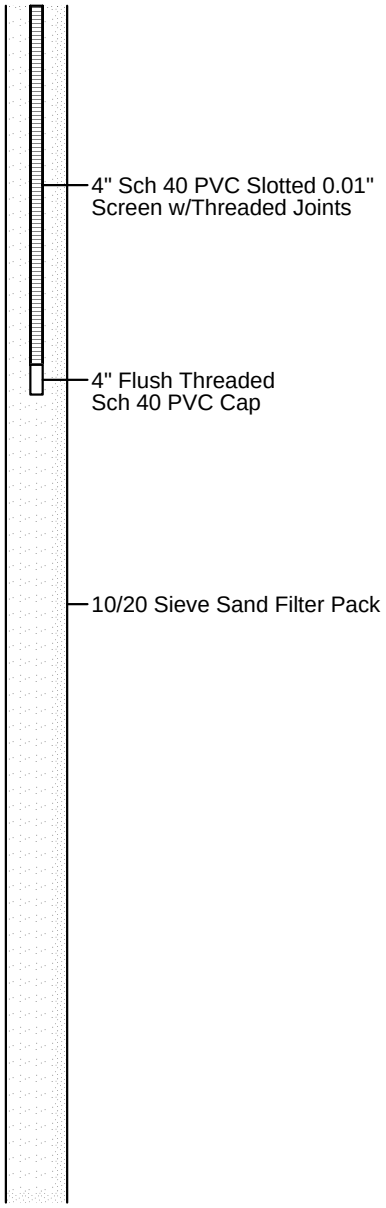
Elev., TOC (ft.msl)	: 6947.40
Elev., PAD (ft. msl)	: 6945.07
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634301.36
E	: 2546150.80

Saturation
▼ Saturation

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
18							
19	47			CL	70		SILTY CLAY, moderate, firm, damp, brown-trace grey, faint odor,
20							
21	133			CL	70		SILTY CLAY, STA, reddish brown to grey at 20.5', faint odor,
22							
23	20			CL	60		SILTY CLAY, moderate, firm to stiff, damp,grey, faint odor,
24							
25	17			CL	80		SILTY CLAY, STA, stiff,
26							
27	75			CL	70		SILTY CLAY, STA, stiff, calcareous at base, reddish brown and grey, greenish grey,
28							
29	74			CL	60		SILTY CLAY, low, stiff/crumbly, damp, dark reddish brown and grey, no odor,
30							
31	35			CL	60		SILTY CLAY, STA, very stiff, no odor,
32							
33	20			CL	40		SILTY CLAY, low, very stiff, damp, dark reddish brown, balck shale at base, no odor,
34							
35	30			ML	40		CLAYEY SILT, sandstone gravel (cobble) at top of interval, low, firm/crumbly, dry/damp, brown, no odor,
36							
37	8			ML	50		SILTY CLAY,low, very stiff, dry/damp, brown, no odor,
38							

Completion Results

OW-64



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Pilot Hole 7 1/4 HSA
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 44' BGL
Ground Water	: Not Encountered
Start Date	: 03/05/2018
Finish Date	: 03/05/2018

WELL NO. OW-64

Elev., TOC (ft.msl)	: 6947.40
Elev., PAD (ft. msl)	: 6945.07
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634301.36
E	: 2546150.80

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
38							
39	12			ML	70		SILTY CLAY, STA,
40							
41	8			ML	60		SILTY CLAY, STA,
42							
43	6			ML	60		SILTY CLAY, STA.
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							

Saturation
▼ Saturation

Completion Results

OW-64

10/20 Sieve Sand Filter Pack

DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Auger
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40' BGL
Ground Water	: 20' BGL
Start Date	: 03/09/2018
Finish Date	: 03/09/2018

WELL NO. OW-65

(Sheet 1 of 3)

Elev., TOC (ft.msl)	: 6954.05
Elev., PAD (ft. msl)	: 6951.62
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634238.38
E	: 2546692.01

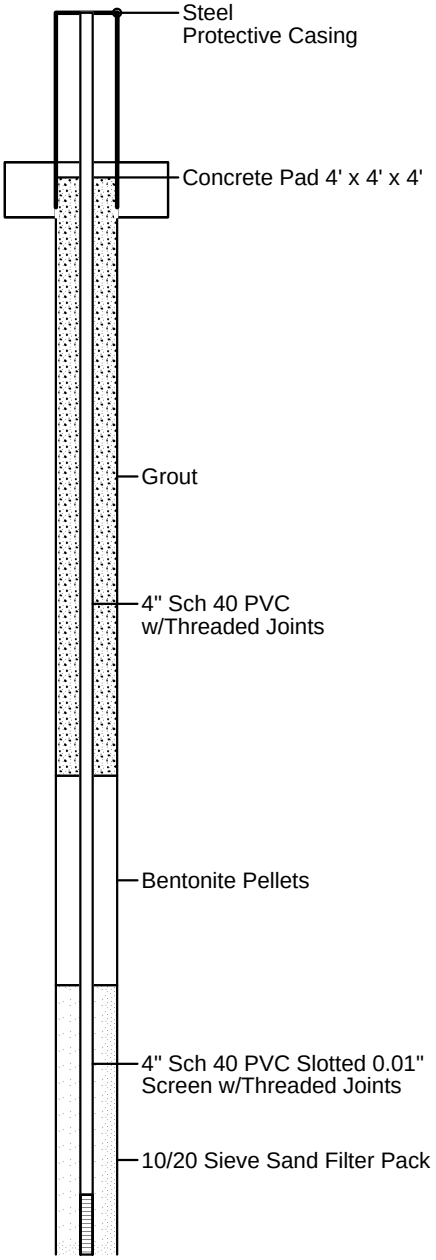
Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
-2							
-1							
0							Cleared borehole to 5', 1" asphalt and base, SILTY CLAY, low, stiff, damp, mixed with gravelly sand, brown, no order,
1							
2				CL	100		
3							
4							
5							
6	17.4			SW	100		GRAVELLY SAND, fine to coarse, loose, damp, gravel <10 mm, brown, no odor,
7	23			SW	80		GRAVELLY SAND, SIMILAR TO ABOVE (STA), clayey sand at base, very damp, brown, odor,
8							
9	12			SM	90		SILTY SAND, medium to coarse, loose, very damp, brown, odor,
10							
11	16			SM	80		CLAYEY GRAVELLY SAND, fine to coarse, compact, gravelly clay lense 2" thick at 11', brown, odor,
12							
13	66			SM	70		SILTY SAND, medium, loose, very damp, brown, odor,
14							
15	822			GC	60		CLAYEY GRAVEL, <10 mm gravel in brown clay, coarse sand throughout, very damp, odor,
16							
17	885			SM	60		SILTY SAND, fine, loose, very damp to moist, hydrocarbon (HC) odor,
18							

Saturation

▼ Saturation

Completion Results

OW-65



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Auger
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40' BGL
Ground Water	: 20' BGL
Start Date	: 03/09/2018
Finish Date	: 03/09/2018

WELL NO. OW-65

(Sheet 2 of 3)

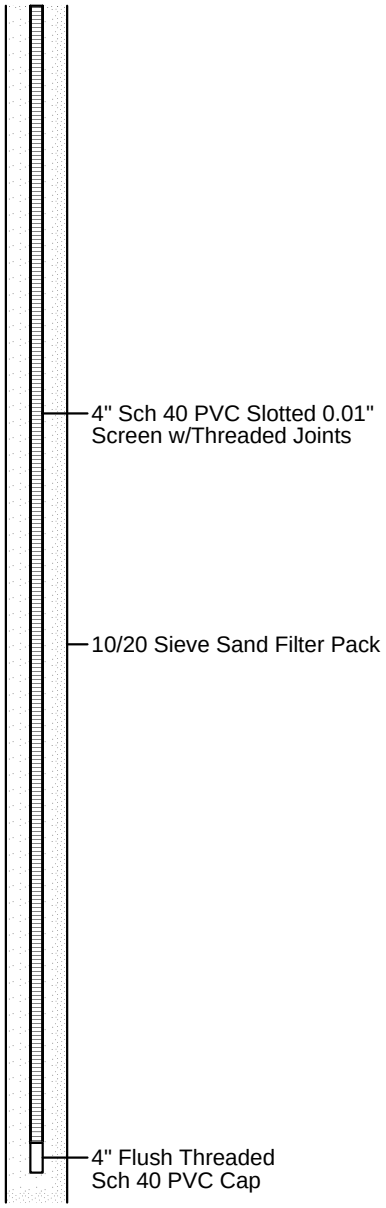
Elev., TOC (ft.msl)	: 6954.05
Elev., PAD (ft. msl)	: 6951.62
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634238.38
E	: 2546692.01

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
18–19	1195	▼		GC	50		CLAYEY GRAVEL, 40 mm sandstone cobbles (tan and green) in brown clay, coarse sand throughout, damp,odor,
20–21				GC	60		CLAYEY GRAVEL, STA, moist to saturated in sand, water in split spoon,
22–23				GC	90		CLAYEY GRAVELLY SAND, coarse sand with 10 mm gravel, loose/soft, saturated, brown, HC odor,
24–25				SC	80		CLAYEY SAND, coarse, loose, very soft, trace gravel, saturated, brown, odor,
26–27				SC	80		CLAYEY SAND, fine to medium, compact, moist, dark brown, HC odor,
28				CL	80		SILTY CLAY, low, very soft, damp,dark brown, strong HC odor,
29				SC	80		CLAYEY SAND, fine, compact, saturated/oily, dark brown, saturated/oily,
30–31				SC	60		CLAYEY SAND, STA, HC odor,
32–33				SC	80		CLAYEY SAND, STA, increase in clay at base, becomes moist,
34–35				SM	90		SILTY SAND, medium to coarse, loose, gravelly (<5 mm) at base, saturated, dark brown, HC odor,
36				SW	80		GRAVELLY SAND, coarse, loose, trace clay-gravel (10 mm), saturated, dark brown, HC odor,
37–38				CL	80		SANDY CLAY, low, firm, trace gravel, damp, dark brown, HC odor,

Saturation
▼ Saturation

Completion Results

OW-65



DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

DiSorbo
Environmental Consulting Firm

Andeavor
Gallup Refinery - French Drain Release
WEST18012

Geologist	: Tracy Payne
Driller	: Enviro-Drill, Inc./Cohagan
Drilling Rig	: CME75
Drilling Method	: Hollow-Stem Auger
Sampling Method	: 2' Split Spoon
Comments	:
Total Depth	: 40' BGL
Ground Water	: 20' BGL
Start Date	: 03/09/2018
Finish Date	: 03/09/2018

WELL NO. OW-65

(Sheet 3 of 3)

Elev., TOC (ft.msl)	: 6954.05
Elev., PAD (ft. msl)	: 6951.62
Elev., GL (ft. msl)	: NS
Site Coordinates	:
N	: 1634238.38
E	: 2546692.01

Depth (ft.)	PID (ppm)	Saturation	Lithology	USCS	Recovery (%)	Sample	DESCRIPTION
38							
39				CL	40		SANDY CLAY, STA.
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							

Saturation
▼ Saturation

Completion Results

OW-65

10/20 Sieve Sand Filter Pack

DiSorbo Consulting, LLC

1001 Louisiana Street, Suite 3250
Houston, Texas 77002
713-955-1230

8501 N. MoPac Expy, Suite 300
Austin, Texas 78759
512-693-4190

APPENDIX K
YSI 556 OPERATIONS MANUAL
(ON ATTACHED CD)

YSI **Environmental**

YSI 556 MPS

Multi Probe System

Operations Manual

Contents

1. Safety 1

1.1 General Information 1

2. General Information 6

2.1 Description 6
2.2 Unpacking the Instrument 7
2.3 Features of the YSI 556 Multi-Probe System 8
2.4 Batteries 9
2.5 Power On 14
2.6 Setting Display Contrast 14
2.7 Backlight 15
2.8 General Screen Features 15
2.9 Keypad Use 16
2.10 Instrument Reset 17
2.11 Menu Flowchart 18

3. Probe Module 18

3.1 Introduction 19
3.2 Unpacking the Probe Module 19
3.3 Features of the YSI 5563 Probe Module 20
3.4 Preparing the Probe Module 20
3.5 Transport/Calibration Cup 24
3.6 Instrument/Cable Connection 25

4. Sensors 26

5. Report 29

6. Calibrate 32

6.1 Getting Ready to Calibrate 32
6.2 Calibration Procedures 35
6.3 Return to Factory Settings. 52

7. Run 54

7.1 Real-Time Data 54

8. File 55

8.1 Accessing the File Screen 55
8.2 Directory 56
8.3 View File 58
8.4 Upload to PC 59
8.5 File Memory 63
8.6 Delete All Files 64

9. Logging 66
9.1 Accessing the Logging Setup Screen 66
9.2 Setting Logging Interval 67
9.3 Storing Barometer Readings 67
9.4 Creating a Site List 68
9.5 Editing a Site List 72
9.6 Logging Data Without a Site List 72
9.7 Logging Data with a Site List 75
9.8 Adding Data to Existing Files 77
10. System Setup 79
10.1 Accessing the System Setup Screen 79
10.2 Language Setting 80
10.3 Date and Time Setup 80
10.4 Data Filter 82
10.5 Shutoff Time 84
10.6 Comma Radix 85
10.7 ID 85
10.8 GLP Filename 85
10.9 TDS Constant 86
10.10 Barometer Units 87
10.11 Calibrate Barometer 88
11. Maintenance 90
11.1 Sensor Care and Maintenance 90
11.2 Upgrading YSI 556 MPS Software 96
12. Storage 99
12.1 General Recommendations for Short Term Storage 99
12.2 General Recommendations for Long Term Storage 99
13. Troubleshooting 102
14. Appendix A YSI 556 MPS Specifications 105
15. Appendix B Instrument Accessories 106
16. Appendix C Required Federal Communications Notice 107
17. Appendix D Health Safety 108
18. Appendix E Customer Service 111
18.1 Ordering and Technical Support 111
18.2 YSI Authorized Service Centers 111
18.3 Cleaning Instructions 111

18.4 Packing Procedure 112
18.5 Warranty 113
19. Appendix F Ferrite Bead Installation 114
20. Appendix G EcoWatch 116
20.1 Installing EcoWatch for Windows 116
20.2 EcoWatch Tutorial 116
21. Appendix H Calibration Record Information 127
21.1 Viewing the Calibration Record (.glp) File 127
21.2 Uploading the Calibration Record (.glp) File 127
21.3 Understanding the Calibration Record (.glp) File 127

1. Safety

1.1 General Information

Read all safety information in this manual carefully before using the YSI 556 Multi-Probe System (MPS). Reagents that are used to calibrate and check this instrument may be hazardous to your health. Take a moment to review Appendix D Health and Safety.

⚠ **WARNING**

Warnings are used in this manual when misuse of the instrument could result in death or serious injury to a person.

⚠ **CAUTION**

Cautions are used in this manual when misuse of the instrument could result in mild or serious injury to a person and/or damage to equipment.

⚠ **IMPORTANT SAFETY INSTRUCTIONS!**

⚠ **SAVE THESE INSTRUCTIONS!**

⚠ In essence, the most important safety rule for use of the YSI 556 MPS is to utilize the instrument ONLY for purposes documented in this manual. This is particularly true of the YSI 6117 rechargeable battery pack that contains nickel metal hydride (NiMH) batteries. The user should be certain to read all of the safety precautions outlined below before using the instrument.

⚠ Batteries

⚠ This instrument is powered by alkaline or optional nickel-metal hydride batteries, which the user must remove and dispose of when the batteries no longer power the instrument. Disposal requirements vary by country and region, and users are expected to understand and follow the battery disposal requirements for their specific locale.

The circuit board in this instrument contains a manganese dioxide lithium "coin cell" battery that must be in place for continuity of power to memory devices on the board. This battery is not user serviceable or replaceable.

When appropriate, an authorized YSI service center will remove this battery and properly dispose of it, per service and repair policies.

⚠YSI Rechargeable Battery Pack Safety Information

⚠Restrictions on Usage

1. Never dispose of the battery pack in a fire.
2. Do not attempt to disassemble the YSI 6117 battery pack
3. Do not tamper with any of the electronic components or the batteries within the battery pack. Tampering with either the electronic circuitry or the batteries will result in the voiding of the warranty and the compromising of the system performance, but, more importantly, can cause safety hazards which result from overcharging such as overheating, venting of gas, and loss of corrosive electrolyte.
4. Do not charge the battery pack outside the 0–40°C temperature range.
5. Do not use or store the battery at high temperature, such as in strong direct sunlight, in cars during hot weather, or directly in front of heaters.
6. Do not expose the battery pack to water or allow the terminals to become damp.
7. Avoid striking or dropping the battery pack. If the pack appears to have sustained damage from these actions or malfunctions after an impact or drop, the user should not attempt to repair the unit. Instead, contact YSI Customer Service. Refer to *Appendix E Customer Service.*
8. If the battery pack is removed from the YSI 556 MPS, do not store it in pockets or packaging where metallic objects such as keys can short between the positive and negative terminals.

⚠Precautions for Users with Small Children.

Keep the battery pack out of reach of babies and small children.

⚠Danger Notifications – Misuse creates a STRONG possibility of death or serious injury.

FAILURE TO CAREFULLY OBSERVE THE FOLLOWING PROCEDURES AND PRECAUTIONS CAN RESULT IN LEAKAGE OF BATTERY FLUID, HEAT GENERATION, BURSTING, AND SERIOUS PERSONAL INJURY.

1. Never dispose of the battery pack in a fire or in heat.
2. Never allow the positive and negative terminals of the battery pack to become shorted or connected with electrically conductive materials. When the battery pack has been removed from the YSI 556 MPS, store it in a heavy plastic bag to prevent accidental shorting of the terminals.
3. Never disassemble the battery pack and do not tamper with any of the electronic components or the batteries within the battery pack. The battery pack is equipped with a variety of safety features. Accidental deactivation of any of these safety features can cause a serious hazard to the user.
4. The NiMH batteries in the battery pack contain a strong alkaline solution (electrolyte). The alkaline solution is extremely corrosive and will cause damage to skin or other tissues. If any fluid from the battery pack comes in contact with a user's eyes, immediately flush with clean water and consult a physician immediately. The alkaline solution can damage eyes and lead to permanent loss of eyesight.

⚠ Warning Notifications – Misuse creates a possibility of death or serious injury

1. Do not allow the battery pack to contact freshwater, seawater, or other oxidizing reagents that might cause rust and result in heat generation. If a battery becomes rusted, the gas release vent may no longer operate and this failure can result in bursting.
2. If electrolyte from the battery pack contacts the skin or clothing, thoroughly wash the area immediately with clean water. The battery fluid can irritate the skin.

⚠ Caution Notifications – Misuse creates a possibility of mild or serious injury or damage to the equipment.

1. Do not strike or drop the battery pack. If any impact damage to the battery pack is suspected, contact YSI Customer Service. Refer to *Appendix E Customer Service*.

2. Store the battery pack out of reach of babies and small children.
3. Store the battery pack between the temperatures of -20 and 30°C.
4. Before using the battery pack, be sure to read the operation manual and all precautions carefully. Then store this information carefully to use as a reference when the need arises.

⚠YSI 616 Cigarette Lighter Charger Safety Information

1. This section contains important safety and operating instructions for the YSI 556 MPS cigarette lighter battery charger (YSI 616; RadioShack Number 270-1533E). BE SURE TO SAVE THESE INSTRUCTIONS.
2. Before using the YSI 616 cigarette lighter charger, read all instructions and cautionary markings on battery charger, battery pack, and YSI 556 MPS.
3. Charge the YSI 6117 battery pack with the YSI 616 cigarette lighter charger ONLY when the YSI 6117 is installed in the YSI 556 MPS.
4. Do not expose charger to rain, moisture, or snow.
5. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
6. To reduce risk of damage to cigarette lighter and cord, pull by cigarette lighter rather than cord when disconnecting charger.
7. Make sure that the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
8. Do not operate charger with damaged cord or cigarette lighter connector – replace it immediately.
9. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; contact YSI Customer Service. Refer to *Appendix E Customer Service*.
10. Do not disassemble charger other than to change the fuse as instructed. Replace the part or send it to YSI Product Service if repair is required (refer to *Appendix E Customer Service*). Incorrect reassembly may result in a risk of electric shock or fire.

11. To reduce risk of electric shock, unplug charger before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

⚠ YSI 556 MPS Water Leakage Safety Information

The YSI 556 MPS has been tested and shown to comply with IP67 criterion, i.e. submersion in 1 meter of water for 30 minutes with no leakage into either the battery compartment or the main case. However, if the instrument is submersed for periods of time in excess of 30 minutes, leakage may occur with subsequent damage to the batteries, the rechargeable battery pack circuitry, and/or the electronics in the main case.

If leakage into the battery compartment is observed when using alkaline C cells, remove batteries, dispose of batteries properly, and dry the battery compartment completely, ideally using compressed air. If corrosion is present on the battery terminals, contact YSI Customer Service for instructions. Refer to *Appendix E Customer Service*.

If leakage into the battery compartment is observed when using the YSI rechargeable battery pack, remove the battery assembly and set aside to dry. Return the battery pack to YSI Product Service for evaluation of possible damage. Finally dry the battery compartment completely, ideally using compressed air. If corrosion is present on the battery terminals, contact YSI Customer Service for instructions. Refer to *Appendix E Customer Service*.

⚠ **CAUTION:** If water has contacted the rechargeable battery pack, do not attempt to reuse it until it has been evaluated by YSI Product Service (refer to Appendix E Customer Service). Failure to follow this precaution can result in serious injury to the user.

If it is suspected that leakage into the main cavity of the case has occurred, remove the batteries immediately and return the instrument to YSI Product Service for damage assessment. Refer to *Appendix E Customer Service*.

⚠ **CAUTION:** Under no circumstances should the user attempt to open the main case.

2. General Information

2.1 Description

The rugged and reliable YSI 556 MPS (Multi-Probe System) combines the versatility of an easy-to-use, easy-to-read handheld unit with all the functionality of a multi-parameter system. Featuring a waterproof, impact-resistant case, the YSI 556 MPS simultaneously measures dissolved oxygen, conductivity, temperature, and optional pH and ORP. A simple cellular phone style keypad and large display make the instrument easy to use. The YSI 556 MPS is compatible with YSI EcoWatch™ for Windows™ software.

The YSI 556 MPS assists the user in conforming to Good Laboratory Practice (GLP) standards which help ensure that quality control/quality assurance methods are followed. Battery life is displayed with a fuel gauge, and the user can choose standard alkaline batteries or an optional rechargeable battery pack.

The 1.5 MB memory can store more than 49,000 data sets. Other options include a flow cell and barometer. The internal barometer can be user-calibrated and displayed along with other data, used in dissolved oxygen calibrations, and logged to memory for tracking changes in barometric pressure.

Features

- Waterproof -meets IP67 specifications
- Field-replaceable DO electrode module; pH and pH/ORP sensors
- Compatible with EcoWatch™ for Windows™ data analysis software
- Assists with Good Laboratory Practice Standards (GLP)
- Choice of DO membrane material for different applications
- Easy-to-use, screw-on cap DO membranes
- User-upgradeable software from YSI website
- Three-year warranty on the instrument; one-year on the probe modules
- Available with 4,10, and 20 m cable lengths
- Stores over 49,000 data sets, time and date stamped

- Auto temperature compensating display contrast
- Optional barometer
- Optional rechargeable battery pack or standard alkaline batteries

2.2 Unpacking the Instrument

1. Remove the instrument from the shipping box. Note that the probe module and sensors are shipped in a separate box and will be unpacked later in Section *3.2 Unpacking the Probe Module*

   NOTE: Do not discard any parts of supplies.

2. Use the packing list to ensure all items are present.

3. Visually inspect all components for damage.

   NOTE: If any parts are missing or damaged, contact your YSI Service Center immediately. Refer to Appendix E Customer Service or www.ysi.com.

2.3 Features of the YSI 556 Multi-Probe System

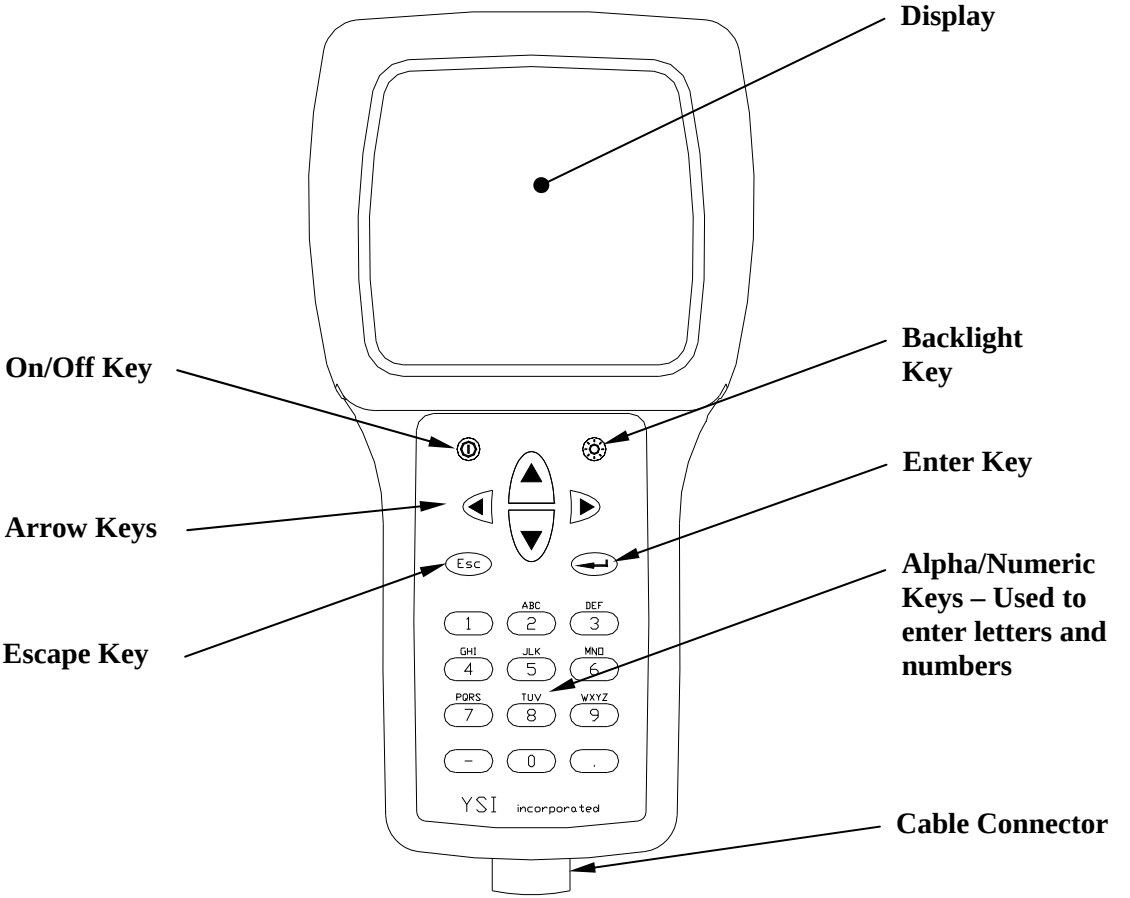


Figure 2.1 Front View of YSI 556 MPS

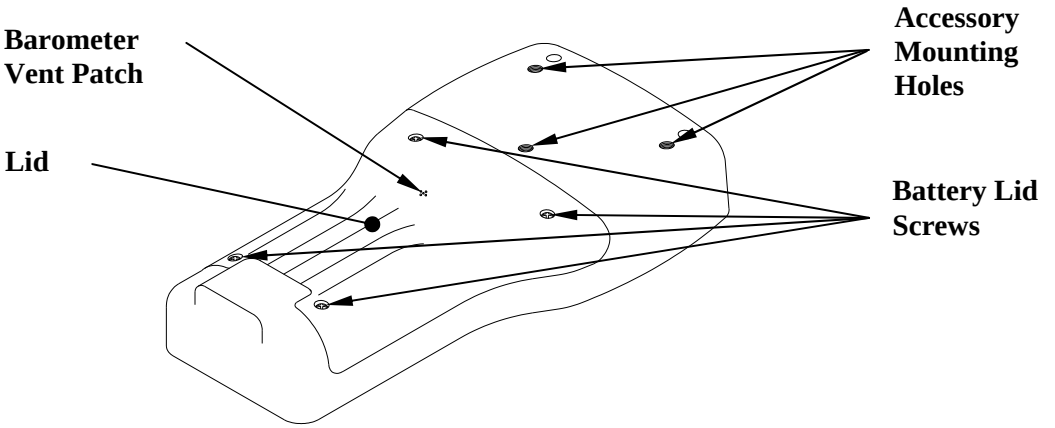


Figure 2.2 Back View of YSI 556 MPS

2.4 Batteries

2.4.1 Battery Life

Standard Alkaline Batteries

With the standard battery configuration of 4 alkaline C cells, the YSI 556 MPS will operate continuously for approximately 180 hours. Assuming a standard usage pattern when sampling of 3 hours of "on time" in a typical day, the alkaline cells will last approximately 60 days.

Optional Rechargeable Battery Pack

When fully charged, the optional rechargeable battery pack will provide approximately 50 hours of battery life.

2.4.2 Inserting 4 C Batteries

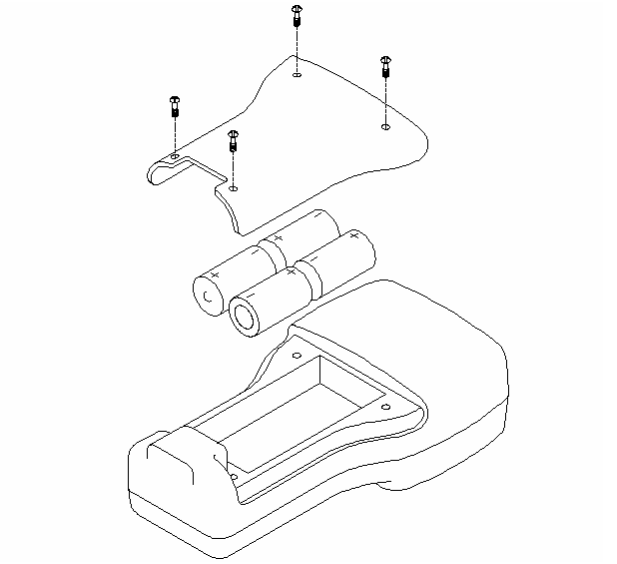


Figure 2.1 Inserting C Cells

⚠ **CAUTION: Install batteries properly to avoid damage to the instrument**.

1. Loosen the four screws in the battery lid on the back of the instrument using any screwdriver.
2. Remove the battery lid.
3. Insert four C batteries between the clips following the polarity (+ and -) labels on the bottom of the battery compartment.
4. Check gasket for proper placement on the battery lid.
5. Replace the battery lid and tighten the 4 screws securely and evenly.

NOTE: Do not over-tighten the screws.

2.4.3 Inserting Optional Rechargeable Battery Pack

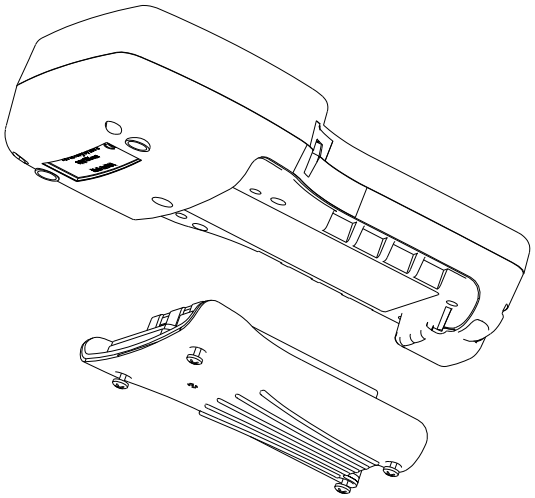


Figure 2.2 Inserting Battery Pack

⚠ **CAUTION: Read all cautions and warning that come with the battery pack before using the battery pack.**

1. Loosen the four screws in the battery lid on the back of the instrument using any screwdriver.

2. Remove the C battery lid and store for future use. Remove C batteries, if installed.

3. Install the rechargeable battery pack and lid and tighten the 4 screws securely and evenly.

NOTE: Do not over tighten the screws.

2.4.4 Charging the Optional Rechargeable Battery Pack

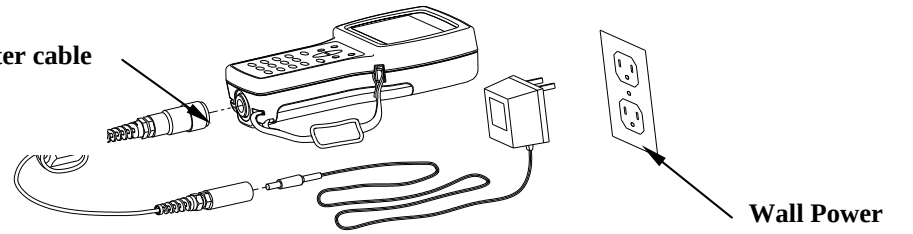


Figure 2.3 Charging the Battery Pack

⚠ **CAUTION: Do not use or store the battery pack at extreme temperatures such as in strong direct sunlight, in cars during hot weather or close to heaters.**

1. Install the rechargeable battery pack into the instrument as described in Section *2.4.3 Inserting Optional Rechargeable Battery Pack*.

2. Attach the charger adapter cable (YSI 6119) to the instrument.

NOTE: Wall power supplies for use in countries outside the US and Canada can be found in *Appendix B Instrument Accessories.*

3. Insert the barrel connector of the wall power supply into the barrel of the adapter cable.

⚠ **CAUTION: Do not charge the battery pack continuously for more than 48 hours.**

⚠ **CAUTION: Do not drop or expose to water.**

⚠ **CAUTION: Do no charge the battery pack at temperatures below 0°C or above 40°C.**

4. Plug the wall power supply into an AC power outlet for approximately 2 hours to obtain an 80% to 90% charge for 6 hours to get a full charge.

NOTE: The battery pack can be recharged whether the instrument is on or off.

2.4.5 Storing the Battery Pack

Remove the battery pack from the instrument when the instrument will not be used for extended periods of time to prevent over discharge of the battery pack.

Store the battery pack in a heavy plastic bag to prevent accidental shorting of the terminals. Store between –20 and 30°C.

2.4.6 Optional Cigarette Lighter Charger

⚠ **CAUTION: Read all warnings and cautions that come with the charger before using the charger.**

⚠ **CAUTION: Only use cigarette lighter charger when rechargeable battery pack is inserted into instrument.**

⚠ **CAUTION: Do not mishandle cigarette lighter charger. Do not expose to moisture.**

1. Plug the barrel connector of the cigarette lighter charger into the mating end of the YSI 6119 Charger Adapter Cable.

2. Attach the MS-19 end of the YSI 6119 Charger Adapter Cable to the instrument.

3. Make one of the following modifications to the other end of the charger:

Slide the adapter ring off the plug to use the device with an American or Japanese vehicle.

.

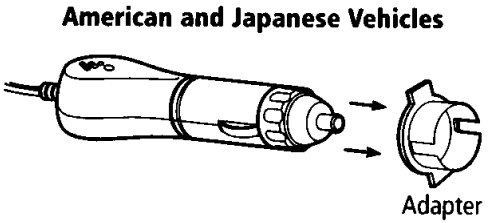


Figure 2.1 Charger Plug Adapter Use

Leave the adapter ring on the plug and position it so that the slots on the adapter ring line up with the plug's spring clips to use the device on a European vehicle.

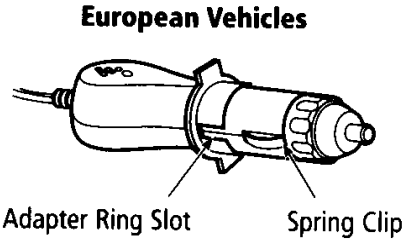


Figure 2.2 European Charger Plug Adapter Use

NOTE: If the charger stops working properly, refer to Section 13 *Troubleshooting.*

2.5 Power On

Press and release the on/off button in the upper left corner of the instrument keypad to turn the instrument on or off. See Figure2.1 Front View of YSI 556 MPS.

2.6 Setting Display Contrast

The display contrast automatically compensates for temperature changes. However, under extreme temperature conditions you may wish to optimize the display by manual adjustment as follows:

1. Press and *hold down* the backlight key in the upper right corner of the keypad and press the “up” arrow to increase (darken) the contrast.

2. Press and *hold down* the backlight key in the upper right corner of the keypad and press the “down” arrow to decrease (lighten) the contrast.

2.7 Backlight

Press and *release* the backlight key in the upper right corner of the keypad to turn the backlight on or off. See Figure 2.1 Front View of YSI 556 MPS.

NOTE: The backlight turns off automatically after two minutes of non-use.

2.8 General Screen Features

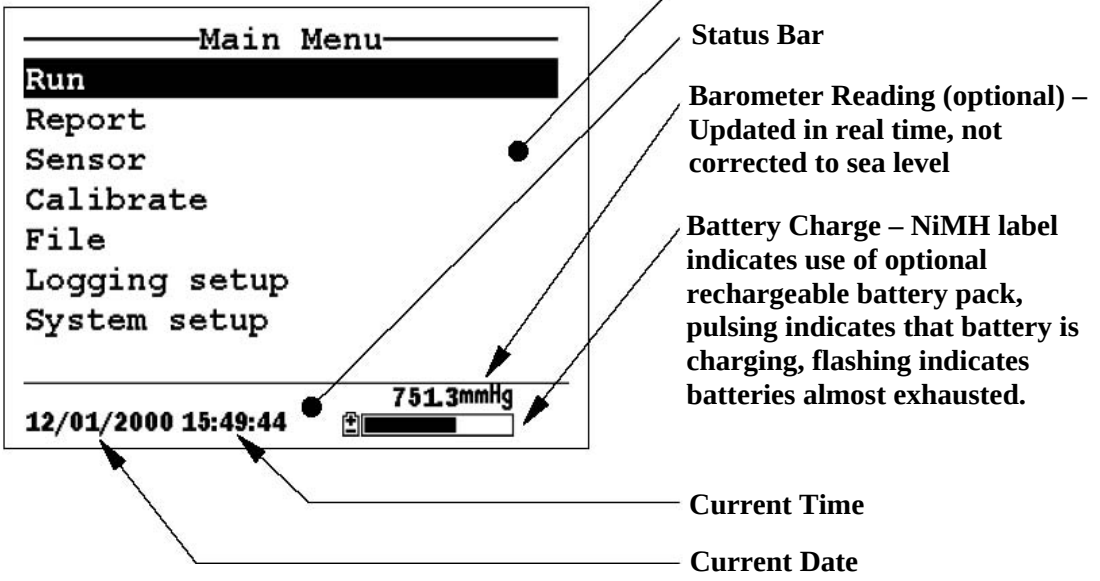


Figure 2.4 Main Screen Menu

2.9 Keypad Use

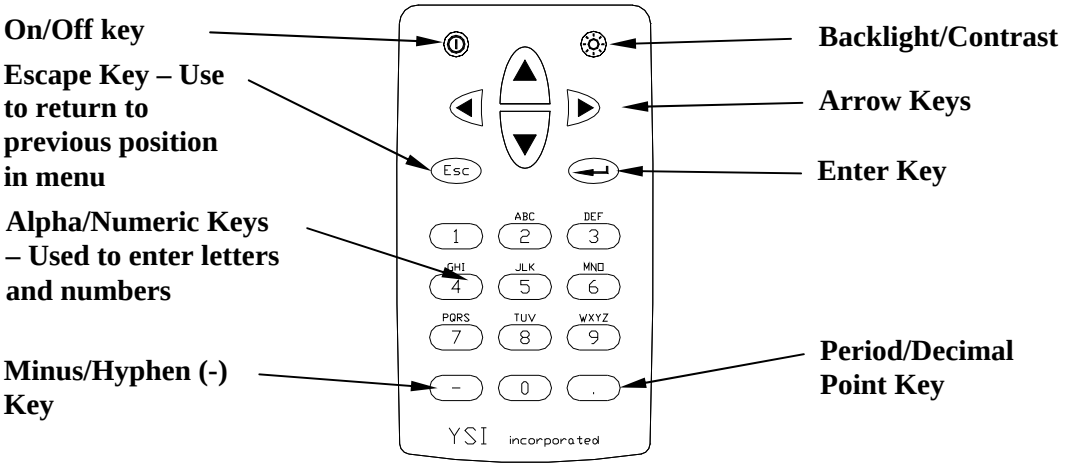


Figure 2.5 Keypad Features

KEY	LETTER/NUMBER
1	1
2	ABC2abc3
3	DEF3def3
4	GHI4ghi4
5	JKL5jkl5
6	MNO6mno6
7	PQRS7pqrs7
8	TUV8tuv8
9	WXYZ9wxyz9
0	0

Figure 2.6 Keypad Features

1. See Figure 2.10 Keypad Letters & Numbers and press the appropriate key repeatedly until letter or number desired appears in display.

NOTE: Press the key repeatedly in rapid succession to get to the desired letter or number. If you pause for more than a second, the cursor automatically scrolls to the right to prepare for the next input.

EXAMPLE 1: Press the **6** key *once* and *release* to display an uppercase “M”.

EXAMPLE 2: Press the **6** key *four times* and *release* to display the number “6”.

EXAMPLE 3: Press the **6** key *five times* and *stop* to display a lowercase “m”.

2. Press the left arrow key to go back and reenter a number or setter that needs to be changed.

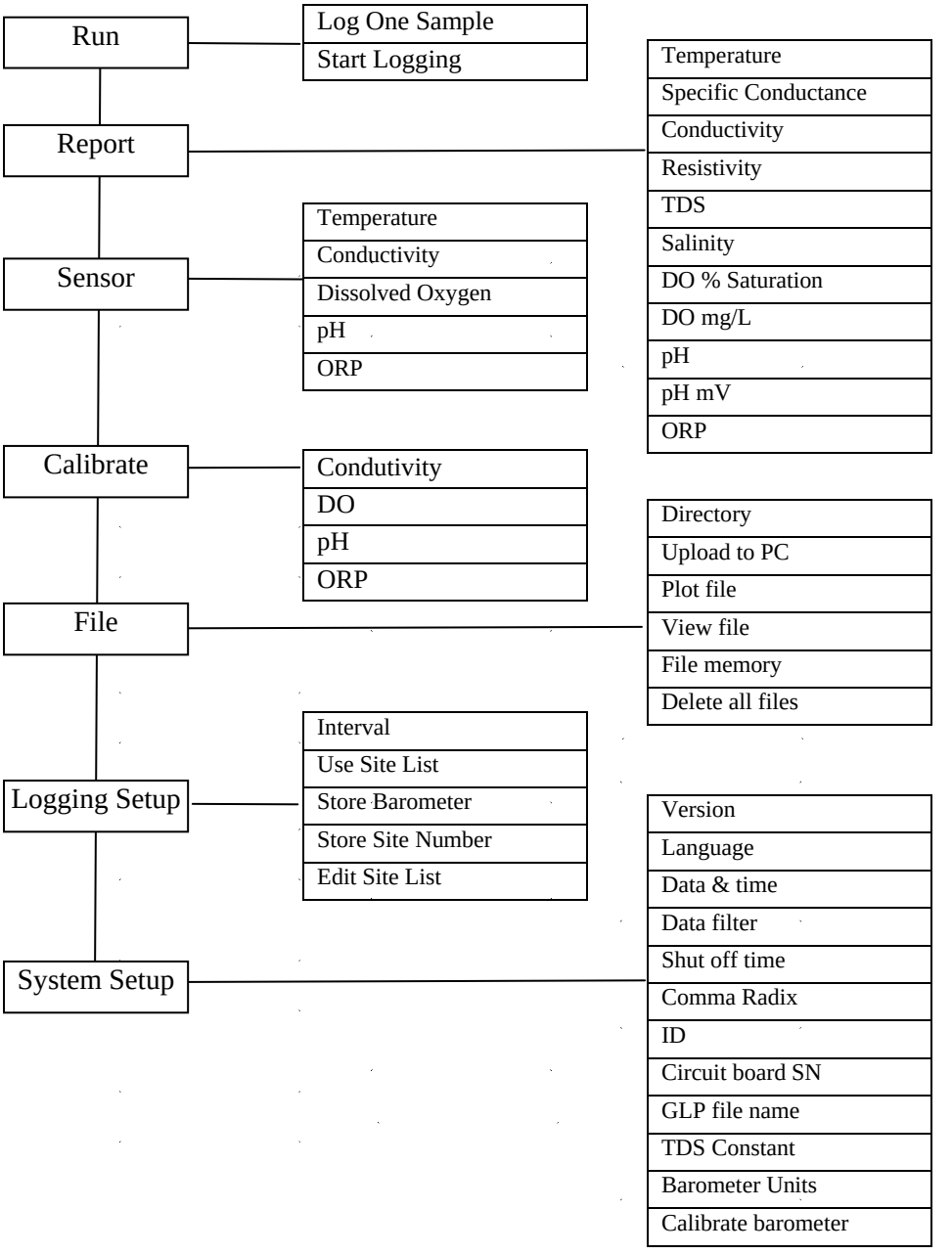
Press the **Enter** key when your entry is complete.

NOTE: The instrument software permits only numeric entries in many instances, such as when setting the clock or entering calibration parameters.

2.10 Instrument Reset

The YSI 556 MPS is characterized by sophisticated software that should provide trouble-free operation. However, as with all high-capability software packages, it is always possible that the user will encounter circumstances in which the instrument does not respond to keypad entry. If this occurs, the instrument function can easily be restored by removing and then reapplying battery power. Simply remove either your C-cells or rechargeable battery pack from the battery compartment, wait 30 seconds and then replace the batteries. See Section *2.4 Batteries* for battery removal/reinstallation instructions.

2.11 Menu Flowchart



3. Probe Module

3.1 Introduction

The YSI 5563 Probe module is used for measuring dissolved oxygen, temperature, conductivity, and optional pH and ORP. The probe module is rugged, with the sensors enclosed in a heavy duty probe sensor guard with attached sinking weight. A 4, 10 or 20 meter cable is directly connected to the probe module body making it waterproof. An MS-19 connector at the end of the cable makes the YSI 5563 fully compatible with the YSI 556 Multi-Probe System.

3.2 Unpacking the Probe Module

1. Remove the YSI 5563 Probe Module from the shipping boxes.

   NOTE: Do not discard any parts or supplies.

2. Use the packing list to ensure all items are present.

3. Visually inspect all components for damage.

NOTE: If any parts are missing or damaged, contact a YSI representative immediately. Refer to: *Appendix E Customer Service* o visit www.ysi.com.

3.3 Features of the YSI 5563 Probe Module

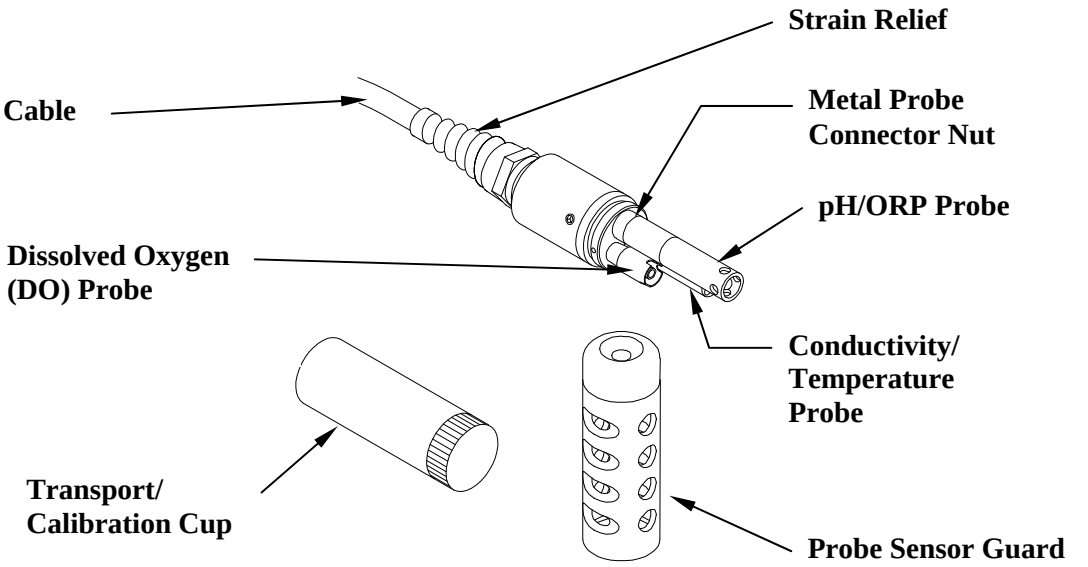


Figure 3.1 Probe Module

3.4 Preparing the Probe Module

To prepare the probe module for calibration and operation, you need to install the sensors into the connectors on the probe module bulkhead. In addition to sensor installation, you need to install a new DO membrane cap.

3.4.1 Sensor Installation

Whenever you install, remove or replace a sensor, it is extremely important that the entire probe module and all sensors be thoroughly dried prior to the removal of a sensor or a sensor port plug. This will prevent water from entering the port. Once you remove a sensor or plug, examine the connector inside the probe module sensor port. If any moisture is present, use compressed air to completely dry the connector. If the connector is corroded, return the probe module to your YSI Distributor or directly to YSI Customer Service. Refer to *Appendix E Customer Service*.

Conductivity/Temperature and pH, pH/ORP Sensor Installation

1. Unscrew and remove the probe sensor guard.

2. Using the sensor installation tool supplied in the YSI 5511 maintenance kit, unscrew and remove the sensor port plugs.

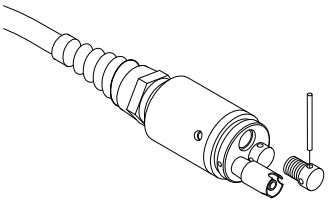


Figure 3.2 Port Plug Removal

3. Locate the port with the connector that corresponds to the sensor that is to be installed.

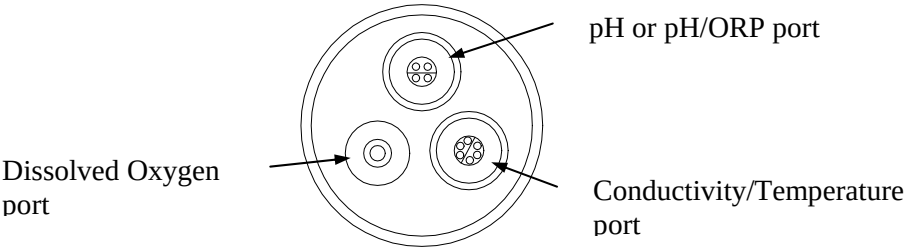


Figure 3.3 Sensor Port Identification

4. Apply a thin coat of o-ring lubricant (supplied in the YSI 5511 maintenance kit) to the o-rings on the connector side of the sensor (see Figure 3.4 O-ring Lubrication).

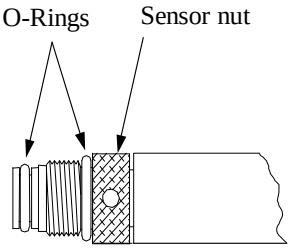


Figure 3.4 O-ring Lubrication

⚠ **CAUTION:** Make sure that there are NO contaminants between the o-ring and the sensor. Contaminants that are present under the o-ring may cause the o-ring to leak.

5. Be sure the probe module sensor port is free of moisture and then insert the sensor into the correct port. Gently rotate the sensor until the two connectors align.

6. With the connectors aligned, screw down the sensor nut using the sensor installation tool.

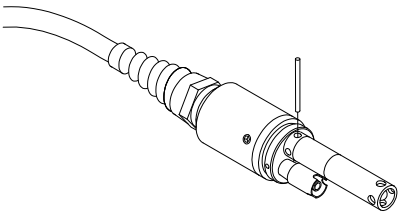


Figure 3.5 Sensor Installation

⚠ **CAUTION:** Do not cross thread the sensor nut. Tighten the nut until it is flush with the face of the probe module bulkhead. Do not over tighten.

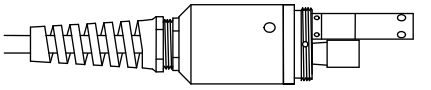


Figure 3.6 Bulkhead Seating

7. Repeat steps 3-6 for any other sensors.

8. Replace the probe sensor guard.

Dissolved Oxygen Sensor Installation

The YSI 5563 comes with the DO sensor already installed. Refer to Section *11.1.2 DO Sensor Replacement* for instructions on installing the YSI 559 Replaceable DO Module Kit.

3.4.2 Membrane Cap Selection

The YSI 5563 is shipped with a YSI 5909 kit that contains membrane caps made with 2 mil polyethylene (PE), a material which should be ideal for most field applications of the 556. However, YSI also offers membrane caps made with two other materials (1 mil polyethylene and 1 mil Teflon) which some users may also prefer. All membranes available for the 556/5563 system provide comparable accuracy if used properly. The difference between the two thicknesses of PE is found in the trade-off of flow dependence and response time as described below. Teflon is offered because some users may prefer to continue using the traditional membrane material used by YSI. To avoid confusion, the membrane caps are color coded as described below and can be ordered in kits as noted:

1 mil Teflon – Black Caps (Kit = YSI 5906)
1 mil Polyethylene (PE) – Yellow Caps (Kit = YSI 5908)
2 mil Polyethylene (PE) – Blue Caps (Kit = YSI 5909)

The 1 mil Teflon caps will offer traditional, reliable performance for most dissolved oxygen applications. The 1 mil PE caps will provide a significantly faster dissolved oxygen response (as long as your 556 Data Filter is set correctly as described below in Sections 10.2 and 10.3.1) while also giving readings which are significantly less flow dependent than the 1 mil Teflon caps. Finally, 2 mil PE caps will show a large reduction in flow dependence over 1 mil Teflon while not significantly increasing the response time. Generally, one of the PE caps is likely to provide better performance for your application.

IMPORTANT: No matter which type of membrane cap you select, you will have to confirm your selection in the 556 software from the Sensor menu as described in Section *4 Sensors*.

3.4.3 Membrane Cap Installation

NOTE: The YSI 5563 DO sensor (already installed in the probe module) was shipped dry. A shipping membrane was installed to protect the electrode. **A new membrane cap must be installed before the first use.**

1. Unscrew and remove the probe sensor guard.
2. Unscrew, remove, and discard the old membrane cap.
3. Thoroughly rinse the sensor tip with distilled water.
4. Prepare the electrolyte according to the directions on the electrolyte solution bottle.
5. Hold the new membrane cap and fill it at least ½ full with the electrolyte solution.
6. Screw the membrane cap onto the sensor moderately tight. A small amount of electrolyte should overflow.

⚠ **Caution:** Do not touch the membrane surface.

7. Screw the probe sensor guard on moderately tight.

3.5 Transport/Calibration Cup

The YSI 5563 Probe module has been supplied with a convenient transport/calibration cup. This cup is an ideal container for calibration of the different sensors, minimizing the amount of solution needed. Refer to Section *6 Calibrate*.

3.5.1 Transport/Calibration Cup Installation

1. Remove probe sensor guard, if already installed.

2. Ensure that an o-ring is installed in the o-ring groove on the threaded end of the probe module body.

3. Screw the transport/calibration cup on the threaded end of the probe module and securely tighten.

   NOTE: Do not over tighten as this could cause damage to the threaded portions.

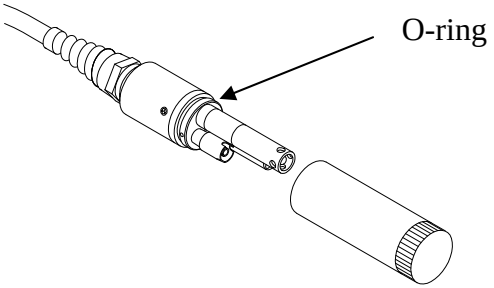


Figure 3.7 Transport/Calibration Cup Installation

3.6 Instrument/Cable Connection

Attach the cable to the instrument as follows:

1. Line up the pins and guides on the cable with the holes and indentations on the cable connector at the bottom of the YSI 556 instrument. See Figure 2.1 Front View of YSI 556 MPS.

2. Holding the cable firmly against the cable connector, turn the locking mechanism clockwise until it snaps into place.

Remove the cable from the instrument by turning the cable connector counterclockwise until the cable disengages from the instrument.

4. Sensors

The Sensors screen allows the user to enable or disable each of the sensors and select which membrane material will be used for the dissolved oxygen sensor. Disabled sensors will not be displayed on the screen in real time or logged to files.

1. Press the **On/off** key to display the run screen.

2. Press the **Escape** key to display the main menu screen.

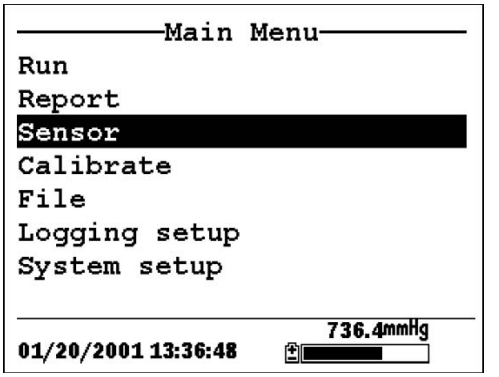


Figure 4.1 Main Menu Screen

3. Use the arrow keys to highlight the **Sensor** selection.

4. Press the **Enter** key to display the sensors enabled screen.

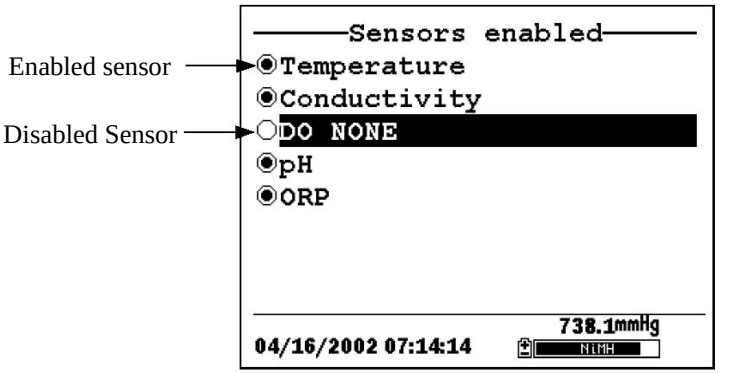


Figure 4.2 Sensors Enabled Screen Before DO Membrane Selection

A black dot to the left of a sensor indicates that sensor is enabled. Sensors with an empty circle are disabled.

Highlight the "DO None" entry as shown above and press **Enter** to display the membrane choice screen. Consult Section *3.4.2 Membrane Cap Selection* for information on the advantages of each type of membrane material. Blue membrane caps using 2 mil polyethylene (PE) were shipped with your YSI 5563 and are likely to be the best choice for most 556 field applications.

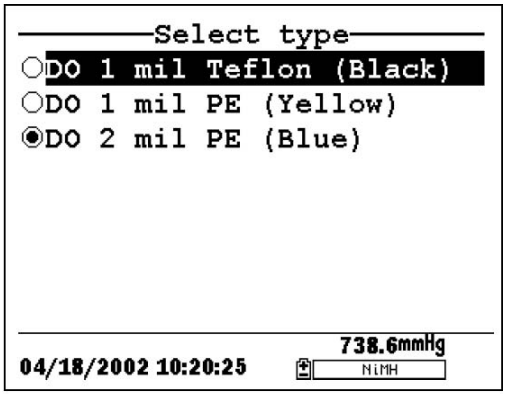


Figure 4.3 Membrane Selection Screen

Highlight the desired membrane choice – in this case, 2 mil PE - and press Enter to activate your selection with a dot to the left of the screen. Then press **Escape** to return to the Sensor menu that now shows your DO membrane selection.

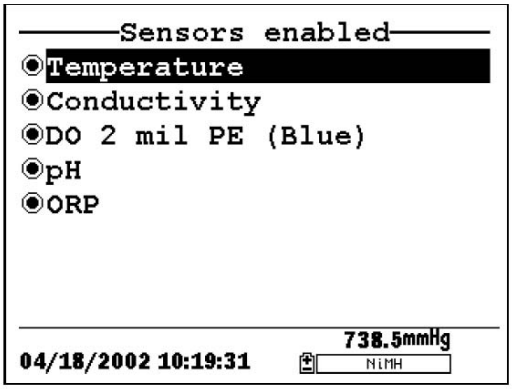


Figure 4.4 Sensors Enabled Screen After DO Membrane Selection

NOTE: The Temperature sensor cannot be disabled. Most other sensors require temperature compensation for accurate readings. In addition, the conductivity sensor must be activated in order to obtain accurate dissolved oxygen mg/L readings.

5. Use the arrow keys to highlight the sensor you want to change, then press the Enter key to enable or disable it.

6. Repeat step 5 for each sensor you want to change.

7. Press the Escape key to return to the main menu screen.

5. Report

The Report Setup screen allows the user to select which sample parameters and units the YSI 556 MPS will display on the screen. It does NOT determine which parameters are logged to memory. Refer to Section *4 Sensors.*

1. Press the **On/off** key to display the run screen.

2. Press the **Escape** key to display the main menu screen.

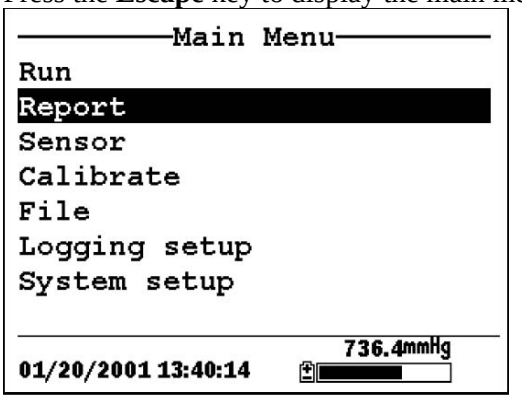


Figure 5.1 Main Menu

3. Use the arrow keys to highlight the **Report** selection.

4. Press the **Enter** key to display the report setup screen.

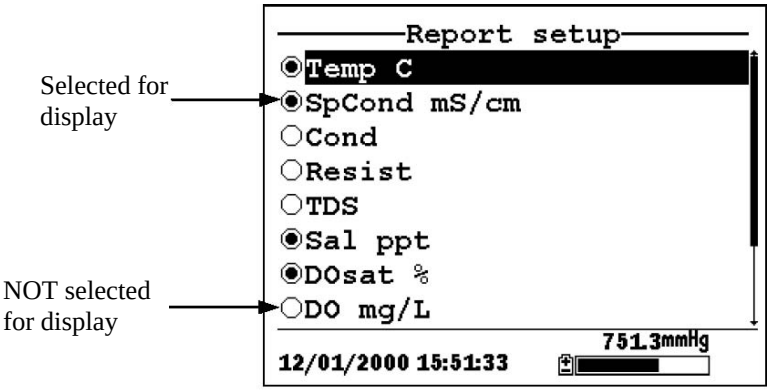


Figure 5.2 Report Setup Screen

NOTE: A black dot to the left of a parameter indicates that parameter is selected for display. Parameters with an empty circle will not be displayed.

NOTE: You may have to scroll down past the bottom of the screen to see all the parameters.

5. Use the arrow keys to highlight the parameter you want to change, then press the **Enter** key. If you can't find the parameter you want, even after scrolling down past the bottom of the screen, the sensor used for that parameter is disabled. Refer to Section *4 Sensors*.

6. If you selected Temperature, Specific Conductivity, Conductivity, Resistance or Total Dissolved Solids, the Units screen will appear.

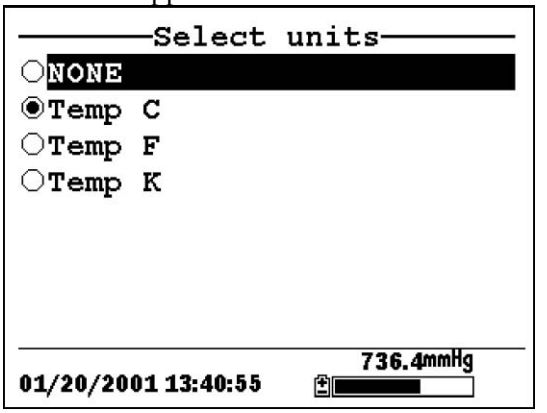


Figure 5.3 Units Screen

7. Use the arrow keys to select the units desired, then press the **Enter** key to return to the report setup screen.

8. Repeat steps 5 and 6 for each parameter you want to change.

NOTE: Specific Conductance (temperature compensated conductivity) is notated on the Run screen with a small ‘c’ after the units of measure.

All parameters may be enabled at the same time.

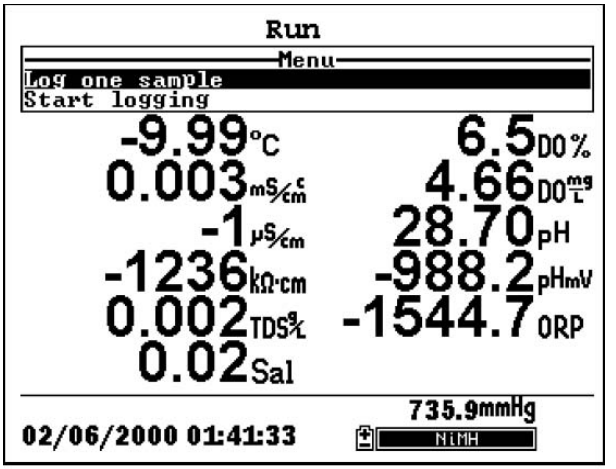


Figure 5.4 All Parameters Displayed

9. Press the **Escape** key to return to the Main menu screen.

6. Calibrate

All of the sensors, except temperature, require periodic calibration to assure high performance. You will find specific calibration procedures for all sensors that require calibration in the following sections. If a sensor listed is not installed in your probe module, skip that section and proceed to the next sensor until the calibration is complete.

⚠ **CAUTION:** Reagents that are used to calibrate and check this instrument may be hazardous to your health. Take a moment to review *Appendix D Health and Safety*. Some calibration standard solutions may require special handling.

6.1 Getting Ready to Calibrate

6.1.1 Containers Needed to Calibrate the Probe Module

The transport/calibration cup that comes with your probe module serves as a calibration chamber for all calibrations and minimizes the volume of calibration reagents required.

Instead of the transport/calibration cup, you may use laboratory glassware to perform calibrations. If you do not use the transport/calibration cup that is designed for the probe module, you are cautioned to do the following:

- ✓ Perform all calibrations with the Probe Sensor Guard installed. This protects the sensors from possible physical damage.
- ✓ Use a ring stand and clamp to secure the probe module body to prevent the module from falling over. Most laboratory glassware has convex bottoms.
- ✓ Ensure that all sensors are immersed in calibration solutions. Many of the calibrations factor in readings from other sensors (e.g., temperature sensor). The top vent hole of the conductivity sensor must also be immersed during some calibrations.

6.1.2 Calibration Tips

1. If you use the Transport/Calibration Cup for dissolved oxygen (DO) calibration, make certain to loosen the seal to allow pressure equilibration before calibration. The DO calibration is a water-saturated air calibration.

2. When calibrating pH, always calibrate with buffer 7 first, regardless if performing a 1, 2, or 3 point calibration

3. The key to successful calibration is to ensure that the sensors are completely submersed when calibration values are entered. Use recommended volumes when performing calibrations.

4. For maximum accuracy, use a small amount of previously used calibration solution to pre-rinse the probe module. You may wish to save old calibration standards for this purpose.

5. Fill a bucket with ambient temperature water to rinse the probe module between calibration solutions.

6. Have several clean, absorbent paper towels or cotton cloths available to dry the probe module between rinses and calibration solutions. Shake the excess rinse water off of the probe module, especially when the probe sensor guard is installed. Dry off the outside of the probe module and probe sensor guard. Making sure that the probe module is dry reduces carry-over contamination of calibrator solutions and increases the accuracy of the calibration.

7. If you are using laboratory glassware for calibration, you do not need to remove the probe sensor guard to rinse and dry the sensors between calibration solutions. The inaccuracy resulting from simply rinsing the sensor compartment and drying the outside of the guard is minimal.

8. If you are using laboratory glassware, remove the stainless steel weight from the bottom of the probe sensor guard by turning the weight counterclockwise. When the weight is removed, the calibration solutions have access to the sensors

without displacing a lot of fluid. This also reduces the amount of liquid that is carried between calibrations.

9. Make certain that port plugs are installed in all ports where sensors are not installed. It is extremely important to keep these electrical connectors dry.

6.1.3 Recommended Volumes

Follow these instructions to use the transport/calibration cup for calibration procedures.

- ✓ Ensure that an o-ring is installed in the o-ring groove of the transport/calibration cup bottom cap, and that the bottom cap is securely tightened.

  NOTE: Do not over-tighten as this could cause damage to the threaded portions.

- ✓ Remove the probe sensor guard, if it is installed.
- ✓ Remove the o-ring, if installed, from the probe module and inspect the installed o-ring on the probe module for obvious defects and, if necessary, replace it with the extra o-ring supplied.
- ✓ Some calibrations can be accomplished with the probe module upright or upside down. A separate clamp and stand, such as a ring stand, is required to support the probe module in the upside down position.
- ✓ To calibrate, follow the procedures in the next section, Calibration Procedures. The approximate volumes of the reagents are specified below for both the upright and upside down orientations.
- ✓ When using the Transport/Calibration Cup for dissolved oxygen % saturation calibration, make certain that the vessel is vented to the atmosphere by loosening the bottom cap or cup assembly and that approximately 1/8 inch (3 cm) of water is present in the cup.

Sensor to Calibrate	Upright	Upside Down
Conductivity	55ml	55ml
pH/ORP	30ml	60ml

Table 6.1 Calibration Volumes

6.2 Calibration Procedures

6.2.1 Accessing the Calibrate Screen

1. Press the **On/off** key to display the run screen.
2. Press the **Escape** key to display the main menu screen.
3. Use the arrow keys to highlight the **Calibrate** selection.

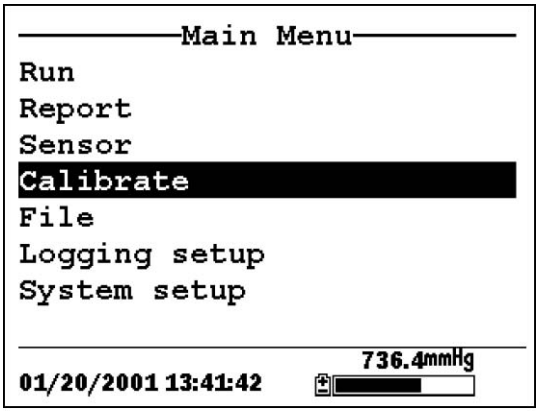


Figure 6.1 Main Menu

4. Press the **Enter** key. The Calibrate screen will be displayed.

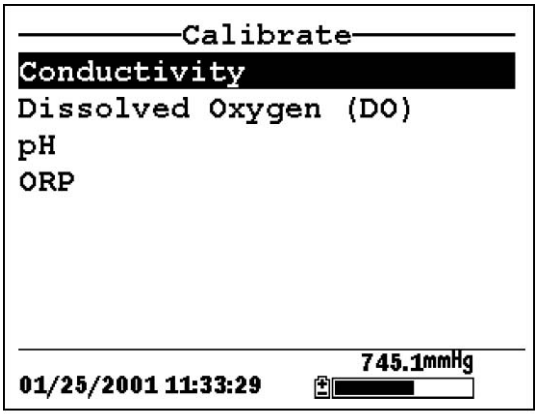


Figure 6.2 Calibrate Screen

6.2.2 Conductivity Calibration

This procedure calibrates specific conductance (recommended), conductivity and salinity. Calibrating any one option automatically calibrates the other two.

1. Go to the calibrate screen as described in Section *6.2.1Accessing the Calibrate Screen.*.

2. Use the arrow keys to highlight the **Conductivity** selection. See Figure 6.2 Calibrate Screen.

3. Press **Enter**. The Conductivity Calibration Screen is displayed.

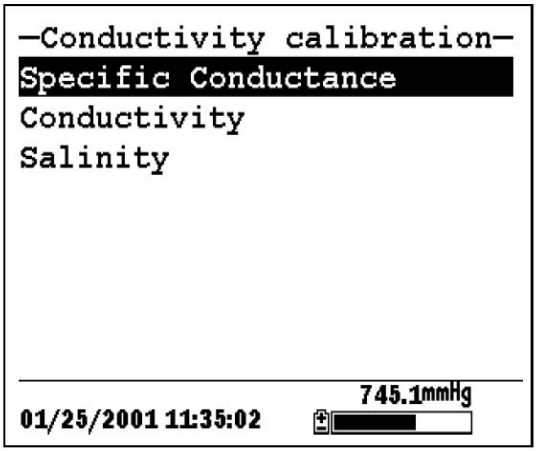


Figure 6.3 Conductivity Calibration Selection Screen

4. Use the arrow keys to highlight the Specific Conductance selection.

5. Press **Enter**. The Conductivity Calibration Entry Screen is displayed.

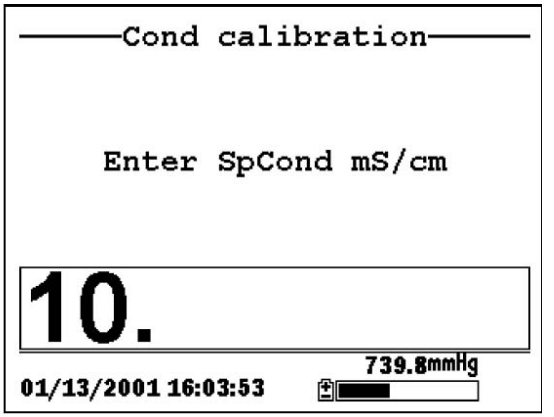


Figure 6.4 Conductivity Calibration Selection Screen

6. Place the correct amount of conductivity standard (see Table 6.1 Calibration Volumes) into a clean, dry or pre-rinsed transport/calibration cup.

⚠ **WARNING**: Calibration reagents may be hazardous to your health. See *Appendix D Health and Safety* for more information.

NOTE: For maximum accuracy, the conductivity standard you choose should be within the same conductivity range as the samples you are preparing to measure. However, we do not recommend using standards less than 1 mS/cm. For example:

- ✓ For fresh water use a 1 mS/cm conductivity standard.
- ✓ For brackish water use a 10 mS/cm conductivity standard.
- ✓ For seawater use a 50 mS/cm conductivity standard.

NOTE: Before proceeding, ensure that the sensor is as dry as possible. Ideally, rinse the conductivity sensor with a small amount of standard that can be discarded. Be certain that you avoid cross-contamination of solutions. Make certain that there are no salt deposits around the oxygen and pH/ORP sensors, particularly if you are employing standards of low conductivity.

7. Carefully immerse the sensor end of the probe module into the solution.

8. Gently rotate and/or move the probe module up and down to remove any bubbles from the conductivity cell.

NOTE: The sensor must be completely immersed past its vent hole. Using the recommended volumes from Table 6.1 Calibration Volumes, should ensure that the vent hole is covered.

9. Screw the transport/calibration cup on the threaded end of the probe module and securely tighten.

NOTE: Do not over tighten as this could cause damage to the threaded portions.

10. Use the keypad to enter the calibration value of the standard you are using.

NOTE: Be sure to enter the value in **mS/cm at 25°C**.

11. Press **Enter**. The Conductivity Calibration Screen is displayed.

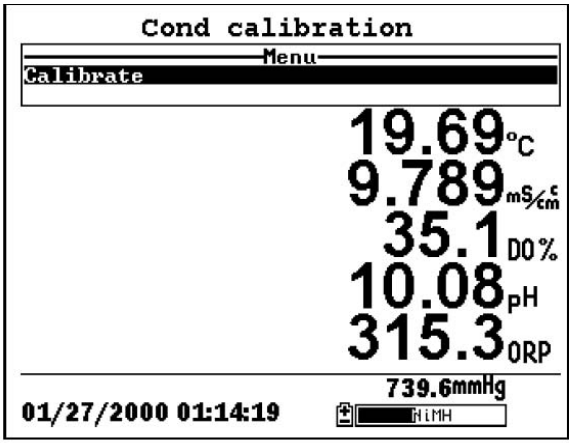


Figure 6.5 Conductivity Calibration Screen

12. Allow at least one minute for temperature equilibration before proceeding. The current values of all enabled sensors will appear on the screen and will change with time as they stabilize.

13. Observe the reading under Specific Conductance. When the reading shows no significant change for approximately 30 seconds, press **Enter**. The screen will indicate that the calibration has been accepted and prompt you to press **Enter** again to Continue.

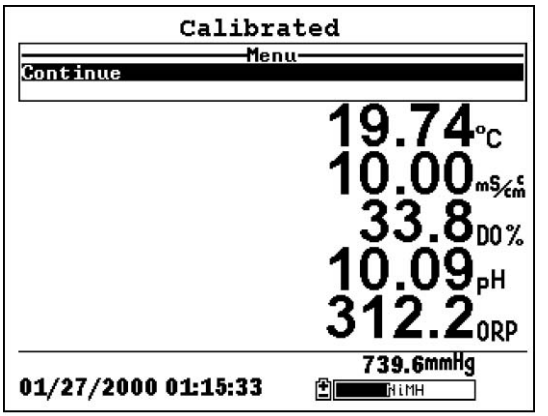


Figure 6.6 Calibrated

14. Press **Enter**. This returns you to the Conductivity Calibrate Selection Screen, See Figure 6.3 Conductivity Calibration Selection Screen..

15. Press **Escape** to return to the calibrate menu. See Figure 6.2 Calibrate Screen .

16. Rinse the probe module and sensors in tap or purified water and dry.

6.2.3 Dissolved Oxygen Calibration

This procedure calibrates dissolved oxygen. Calibrating any one option (% or mg/L) automatically calibrates the other.

1. Go to the calibrate screen as described in Section *6.2.1 Accessing the Calibrate Screen*.

NOTE: The instrument must be on for at least 10 - 15 minutes to polarize the DO sensor before calibrating.

2. Use the arrow keys to highlight the **Dissolved Oxygen** selection. See Figure 6.2 Calibrate Screen.

3. Press **Enter**. The dissolved oxygen calibration screen is displayed.

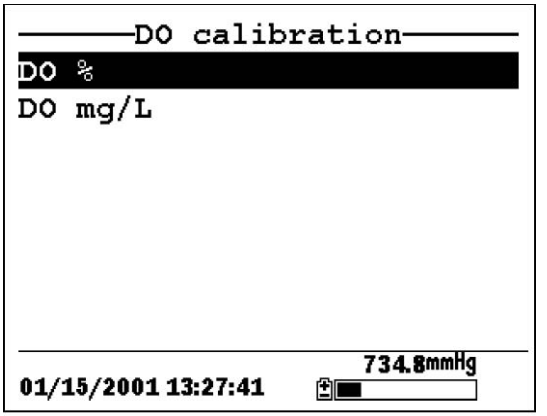


Figure 6.7 DO Calibration Screen

DO Calibration in % Saturation

1. Use the arrow keys to highlight the DO% selection.

2. Press **Enter**. The DO Barometric Pressure Entry Screen is displayed.

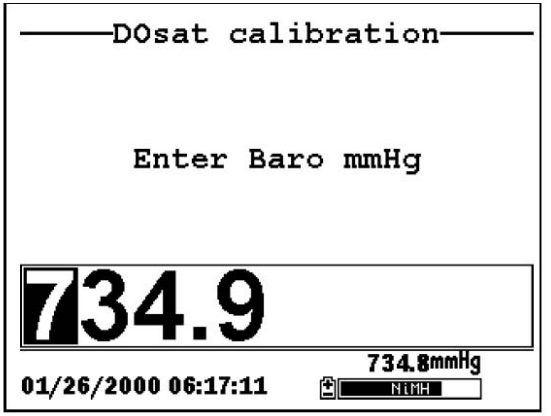


Figure 6.8 DO Barometric Pressure Entry Screen

3. Place approximately 3 mm (1/8 inch) of water in the bottom of the transport/calibration cup.

4. Place the probe module into the transport/calibration cup.

NOTE: Make sure that the DO and temperature sensors are **not** immersed in the water.

5. Engage only 1 or 2 threads of the transport/calibration cup to ensure the DO sensor is vented to the atmosphere.

6. Use the keypad to enter the current local barometric pressure.

NOTE: If the unit has the optional barometer, no entry is required.

NOTE: Barometer readings that appear in meteorological reports are generally corrected to sea level and must be uncorrected before use (refer to Section *10.10 Calibrate Barometer, Step 2*).

7. Press **Enter**. The DO% saturation calibration screen is displayed.

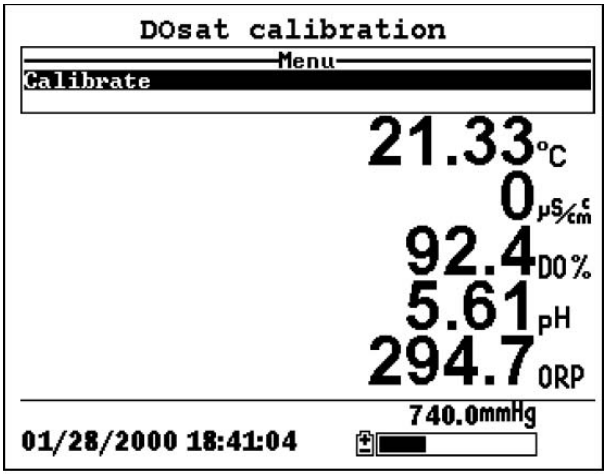


Figure 6.9 DO Sat Calibration Screen

8. Allow approximately ten minutes for the air in the transport/calibration cup to become water saturated and for the temperature to equilibrate before proceeding.

9. Observe the reading under DO %. When the reading shows no significant change for approximately 30 seconds, press **Enter**. The screen will indicate that the calibration has been accepted and prompt you to press **Enter** again to Continue. See Figure 6.6 Calibrated.

10. Press **Enter**. This returns you to the DO calibration screen, See Figure 6.7 DO Calibration Screen.

11. Press **Escape** to return to the calibrate menu. See Figure 6.2 Calibrate Screen.

12. Rinse the probe module and sensors in tap or purified water and dry.

DO Calibration in mg/L

DO calibration in mg/L is carried out in a water sample which has a known concentration of dissolved oxygen (usually determined by a Winkler titration).

1. Go to the DO calibrate screen as described in Section *6.2.3 Dissolved Oxygen Calibration*, steps 1 through 3.

2. Use the arrow keys to highlight the **DO mg/L** selection.

3. Press **Enter**. The DO mg/L Entry Screen is displayed.

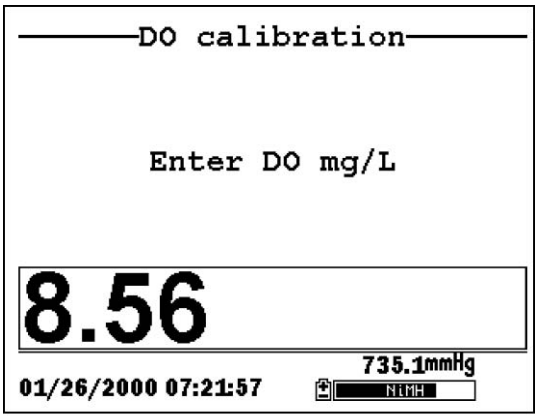


Figure 6.10 DO mg/L Entry Screen

4. Place the probe module in water with a known DO concentration.

NOTE: Be sure to completely immerse all the sensors.

5. Use the keypad to enter the known DO concentration of the water.

6. Press **Enter**. The Dissolved Oxygen mg/L Calibration Screen is displayed.

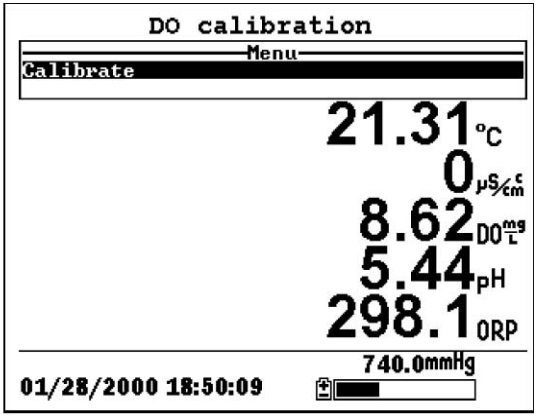


Figure 6.11 DO mg/L Calibration Screen

7. Stir the water with a stir bar, or by rapidly moving the probe module, to provide fresh sample to the DO sensor.

8. Allow at least one minute for temperature equilibration before proceeding. The current values of all enabled sensors will appear on the screen and will change with time as they stabilize.

9. Observe the DO mg/L reading, when the reading is stable (shows no significant change for approximately 30 seconds), press **Enter**. The screen will indicate that the calibration has been accepted and prompt you to press **Enter** again to Continue.

10. Press **Enter**. This returns you to the DO calibration screen. See Figure 6.7 DO Calibration Screen.

11. Press **Escape** to return to the calibrate menu. See Figure 6.2 Calibrate Screen.

12. Rinse the probe module and sensors in tap or purified water and dry.

6.2.4 pH Calibration

1. Go to the calibrate screen as described in *Section 6.2.1 Accessing the Calibrate Screen*.

2. Use the arrow keys to highlight the **pH** selection. See Figure 6.2 Calibrate Screen.

3. Press **Enter**. The pH calibration screen is displayed.

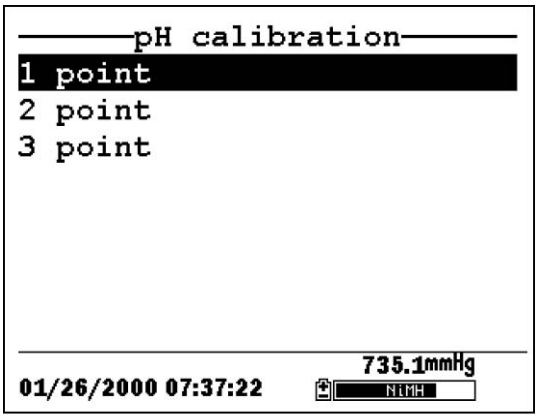


Figure 6.12 pH Calibration Screen

- Select the **1-point** option only if you are adjusting a previous calibration. If a 2-point or 3-point calibration has been performed previously, you can adjust the calibration by carrying out a one point calibration. The procedure for this calibration is the same as for a 2-point calibration, but the software will prompt you to select only one pH buffer.
- Select the **2-point** option to calibrate the pH sensor using only two calibration standards. Use this option if the media being monitored is known to be either basic or acidic. For example, if the pH of a pond is known to vary between 5.5 and 7, a two-point calibration with pH 7 and pH 4 buffers is sufficient. A three point calibration with an additional pH 10 buffer will not increase the accuracy of this measurement since the pH is not within this higher range.
- Select the **3-point** option to calibrate the pH sensor using three calibration solutions. In this procedure, the pH sensor is calibrated with a pH 7 buffer and two additional buffers. The 3-point calibration method assures maximum accuracy when the pH of the media to be monitored cannot be anticipated. The procedure for this calibration is the same as for a 2-point calibration, but the software will prompt you to select a third pH buffer.

4. Use the arrow keys to highlight the **2-point** selection.

5. Press **Enter**. The pH Entry Screen is displayed.

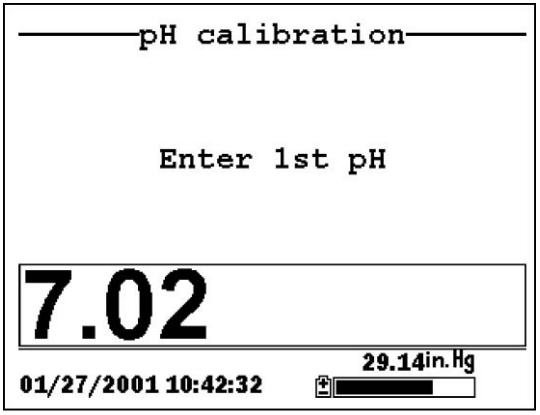


Figure 6.13 pH Entry Screen

6. Place the correct amount (see Table 6.1 Calibration Volumes) of pH buffer into a clean, dry or pre-rinsed transport/calibration cup.

NOTE: Always calibrate with buffer 7 first, regardless if performing a 1, 2, or 3 point calibration.

⚠ **WARNING**: Calibration reagents may be hazardous to your health. See *Appendix D Health and Safety* for more information.

NOTE: For maximum accuracy, the pH buffers you choose should be within the same pH range as the water you are preparing to sample.

NOTE: Before proceeding, ensure that the sensor is as dry as possible. Ideally, rinse the pH sensor with a small amount of buffer that can be discarded. Be certain that you avoid cross-contamination of buffers with other solutions.

7. Carefully immerse the sensor end of the probe module into the solution.

8. Gently rotate and/or move the probe module up and down to remove any bubbles from the pH sensor.

NOTE: The sensor must be completely immersed. Using the recommended volumes from Table 6.1 Calibration Volumes, should ensure that the sensor is covered.

9. Screw the transport/calibration cup on the threaded end of the probe module and securely tighten

NOTE: Do not over tighten as this could cause damage to the threaded portions.

10. Use the keypad to enter the calibration value of the buffer you are using **at the current temperature**.

NOTE: pH vs. temperature values are printed on the labels of all YSI pH buffers.

11. Press **Enter**. The pH calibration screen is displayed.

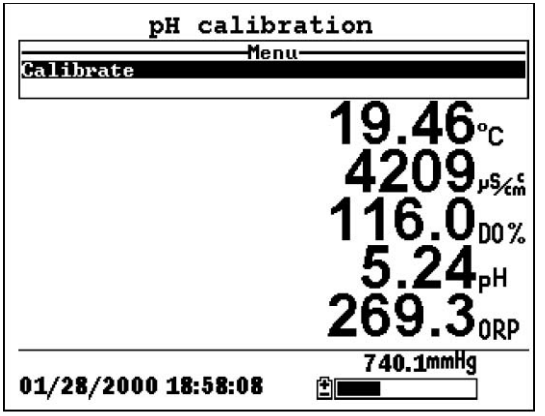


Figure 6.14 pH Calibration Screen

12. Allow at least one minute for temperature equilibration before proceeding. The current values of all enabled sensors will appear on the screen and will change with time as they stabilize.

13. Observe the reading under pH, when the reading shows no significant change for approximately 30 seconds, press **Enter**.

The screen will indicate that the calibration has been accepted and prompt you to press **Enter** again to Continue.

14. Press **Enter**. This returns you to the specified pH Calibration Screen, See Figure 6.13 pH Entry Screen.

15. Rinse the probe module, transport/calibration cup and sensors in tap or purified water and dry.

16. Repeat steps 6 through 13 above using a second pH buffer.

17. Press **Enter**. This returns you to the pH Calibration Screen, See Figure 6.12 pH Calibration Screen.

18. Press **Escape** to return to the calibrate menu. See Figure 6.2 Calibrate Screen.

19. Rinse the probe module and sensors in tap or purified water and dry.

6.2.5 ORP Calibration

1. Go to the calibrate screen as described in Section *6.2.1 Accessing the Calibrate Screen*.

2. Use the arrow keys to highlight the **ORP** selection. See Figure 6.2 Calibrate Screen..

3. Press **Enter**. The ORP calibration screen is displayed.

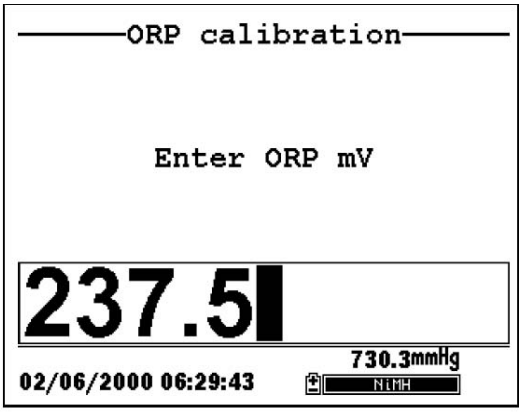


Figure 6.15 Specified ORP Calibration Screen

4. Place the correct amount (see Table 6.1 Calibration Volumes) of a known ORP solution (we recommend Zobell solution) into a clean, dry or pre-rinsed transport/calibration cup.

⚠ **WARNING**: Calibration reagents may be hazardous to your health. See *Appendix D Health and Safety* for more information.

NOTE: Before proceeding, ensure that the sensor is as dry as possible. Ideally, rinse the ORP sensor with a small amount of solution that can be discarded. Be certain that you avoid cross-contamination with other solutions.

5. Carefully immerse the sensor end of the probe module into the solution.

6. Gently rotate and/or move the probe module up and down to remove any bubbles from the ORP sensor.

NOTE: The sensor must be completely immersed. Using the recommended volumes from Table 6.1 Calibration Volumes should ensure that the sensor is covered.

7. Screw the transport/calibration cup on the threaded end of the probe module and securely tighten.

NOTE: Do not over tighten as this could cause damage to the threaded portions.

8. Use the keypad to enter the correct value of the calibration solution you are using at the current temperature. Refer to Table 6.2 Zobell Solution Values.

Temperature °C	Zobell Solution Value, mV
-5	270.0
0	263.5
5	257.0
10	250.5
15	244.0
20	237.5
25	231.0
30	224.5
35	218.0
40	211.5
45	205.0
50	198.5

Table 6.2 Zobell Solution Values

9. Press **Enter**. The ORP calibration screen is displayed.

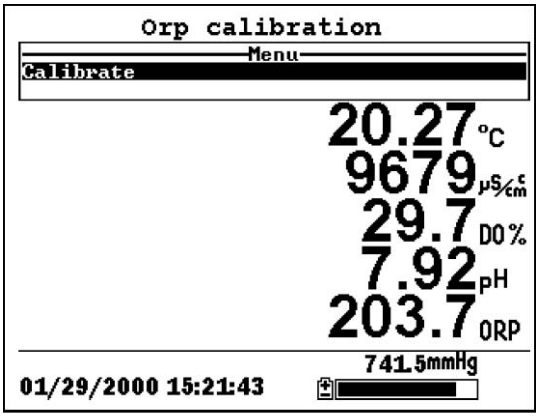


Figure 6.16 DO Cal Screen

10. Allow at least one minute for temperature equilibration before proceeding. The current values of all enabled sensors will appear on the screen and will change with time as they stabilize.

NOTE: Verify that the temperature reading matches the value you used in Table 6.2 Zobell Solution Values.

11. Observe the reading under ORP, when the reading shows no significant change for approximately 30 seconds, press **Enter**. The screen will indicate that the calibration has been accepted and prompt you to press **Enter** again to Continue.

12. Press **Enter**. This returns you to the Calibrate Screen. See Figure 6.2 Calibrate Screen.

13. Rinse the probe module and sensors in tap or purified water and dry.

6.3 Return to Factory Settings.

1. Go to the calibrate screen as described in Section *6.2.1 Accessing the Calibrate Screen*.

2. Use the arrow keys to highlight the **Conductivity** selection. See Figure 6.2 Calibrate Screen.

NOTE: We will use the Conductivity sensor as an example; however, this process will work for any sensor.

3. Press **Enter.** The Conductivity Calibration Selection Screen is displayed. See Figure 6.3 Conductivity Calibration Selection Screen.

4. Use the arrow keys to highlight the **Specific Conductance** selection.

5. Press **Enter.** The Conductivity Calibration Entry Screen is displayed. See Figure 6.4 Conductivity Calibration Entry Screen.

6. Press and hold the **Enter** key down and press the **Escape** key.

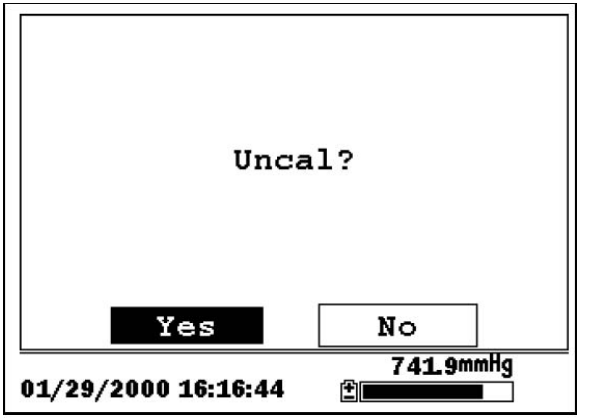


Figure 6.17 ORP Calibration Screen

7. Use the arrow keys to highlight the **YES** selection.

CAUTION: This returns a sensor to the factory settings. For example, in selecting to return specific conductance to the factory setting, salinity and conductivity will automatically return to their factory settings.

8. Press **Enter**. This returns you to the Conductivity Calibrate Selection Screen, See Figure 6.3 Conductivity Calibration Selection Screen. .

9. Press **Escape** to return to the calibrate menu. See Figure 6.2 Calibrate Screen.

7. Run

The Run screen displays data from the sensors in real-time and allows the user to log sample data to memory for later analysis. Refer to Section *9 Logging* for details on logging sample data.

7.1 Real-Time Data

NOTE: Before measuring samples you must prepare the probe module (refer to Section *3.4 Preparing the Probe Module*), attach the probe module to the instrument (refer to Section *3.6 Instrument/Cable Connection*) and calibrate the sensors (refer to Section *6 Calibrate*).

1. Press the On/off key.

OR select Run from the main menu to display the run screen.

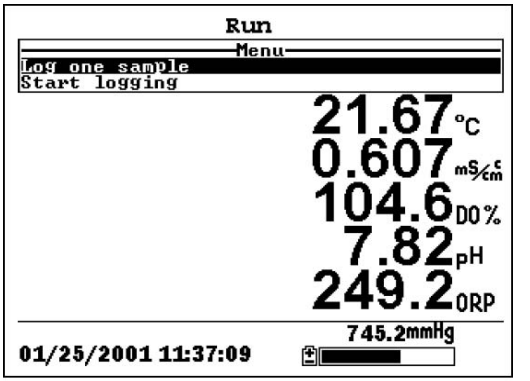


Figure 7.1 Run Screen

2. Make sure the probe sensor guard is installed.

3. Place the probe module in the sample. Be sure to completely immerse all the sensors.

4. Rapidly move the probe module through the sample to provide fresh sample to the DO sensor.

5. Watch the readings on the display until they are stable.

6. Refer to Section *9 Logging* for instructions on logging sample data.

8. File

The File menu allows the user to view, upload or delete sample data and calibration record files stored in the YSI 556 MPS.

8.1 Accessing the File Screen

1. Press the **On/off** key to display the run screen.

2. Press the **Escape** key to display the main menu screen.

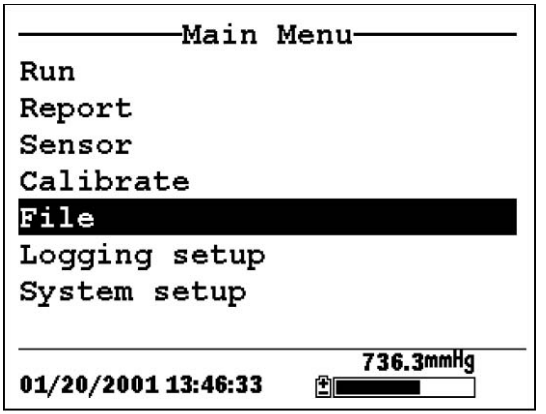


Figure 8.1 Main Menu Screen

3. Use the arrow keys to highlight the **File** selection.

4. Press the **Enter** key. The file screen is displayed.

Figure 8.2 File Screen

8.2 Directory

1. Go to the file screen as described in Section *8.1 Accessing the File Screen*.

2. Use the arrow keys to highlight the **Directory** selection. See Figure 8.2 File Screen.

3. Press the **Enter** key. The file list screen is displayed.

NOTE: Files are listed in the order in which they are logged to memory. Sample Data files have the file extension **.dat**, while Calibration Record files have the file extension **.glp**.

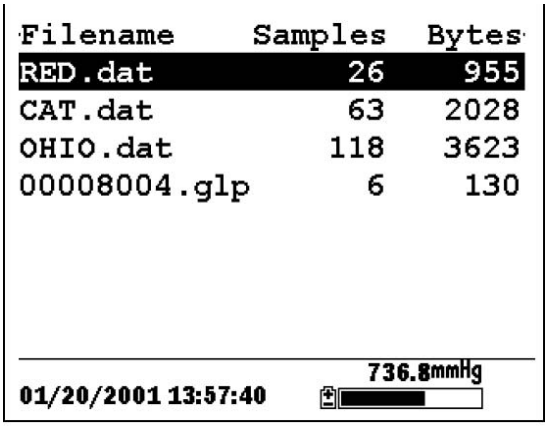


Figure 8.3 File List Screen

4. Use the arrow keys to highlight a file.

5. Press the **Enter** key. The file details screen is displayed.

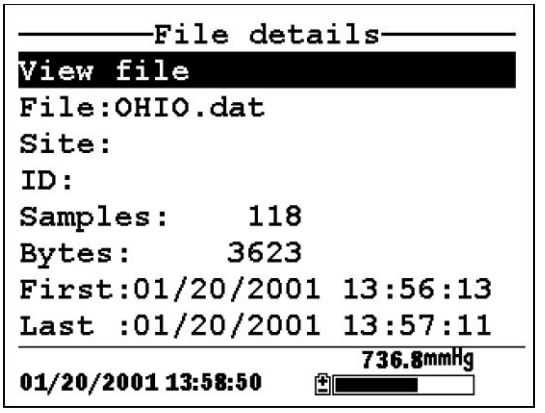


Figure 8.4 File Details Screen

6. Press the **Enter** key to view the file data. Refer to Section *8.3 View File* for details.

7. Press the **Escape** key repeatedly to return to the main menu screen.

8.3 View File

1. Go to the file screen as described in Section *8.1 Accessing the File Screen*. See Figure 8.2 File Screen.

2. Use the arrow keys to highlight the **View file** selection.

3. Press the **Enter** key. A list of files is displayed. See Figure 8.3 File List Screen.

4. Use the arrow keys to highlight an individual file.

   NOTE: You may have to scroll down to see all the files.

5. Press the **Enter** key. The file data is displayed with the file name at t8e top of the display.

   NOTE: If no file name was specified, the data is stored under the default name NONAME1.dat.

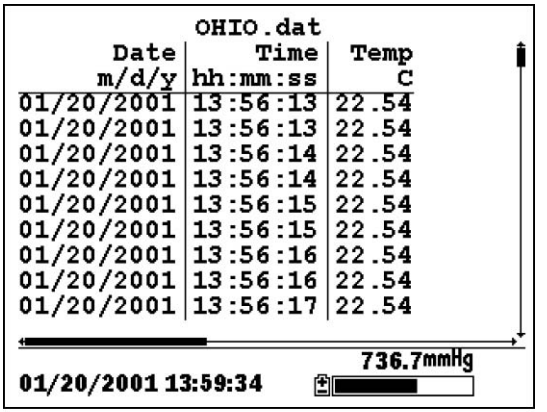


Figure 8.5 File Data Screen

6. Use the arrow keys to scroll horizontally and/or vertically to view all the data.

7. Press the **Escape** key repeatedly to return to the main menu screen.

8.4 Upload to PC

EcoWatch™ for Windows™ must be used as the PC software interface to the YSI 556 MPS. Refer to *Appendix G EcoWatch* for more information. EcoWatch for Windows® is available at no cost via a download from the YSI Web Site (www.ysi.com) or by contacting YSI Customer Support. Refer to *Appendix E Customer Service.*

8.4.1 Upload Setup

1. Disconnect the YSI 5563 Probe Module from the YSI 556 MPS instrument.

2. Connect the YSI 556 MPS to a serial (Comm) port of your computer via the 655173 PC Interface cable as shown in the following diagram:

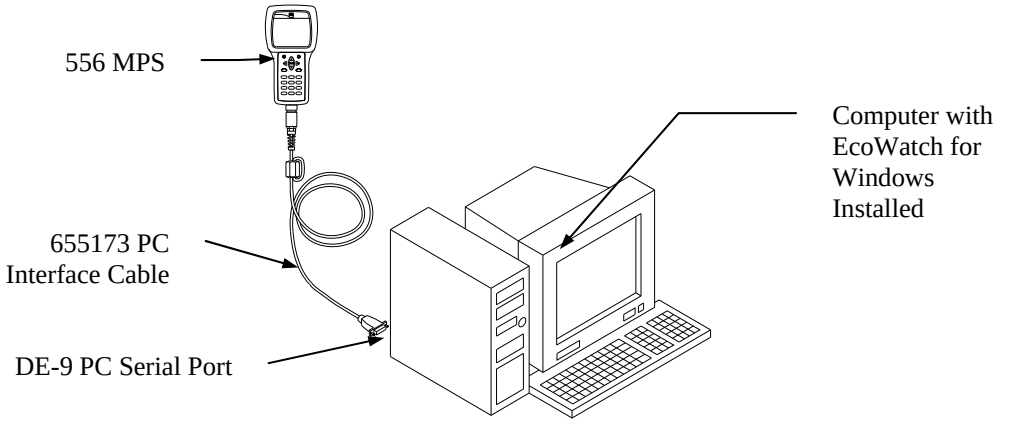


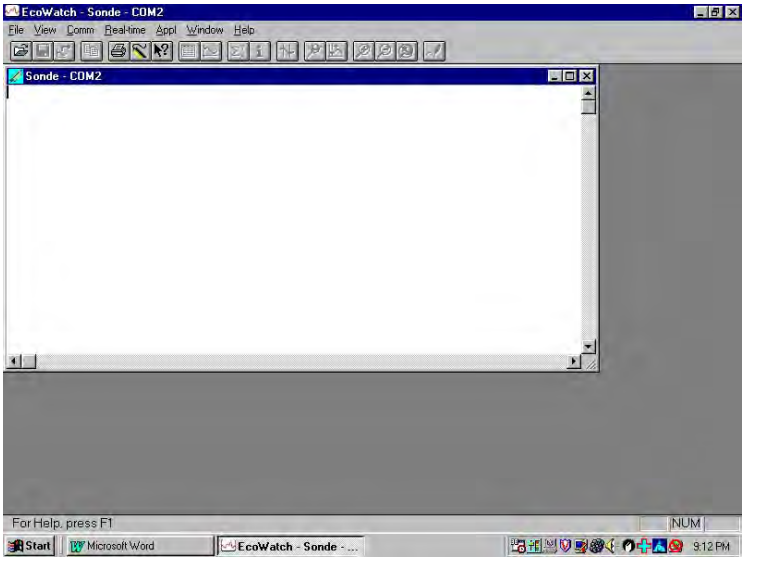
Figure 8.2 Computer/Instrument Interface

3. Open EcoWatch for Windows on your computer.

   NOTE: See *Appendix G EcoWatch* for installation instructions.

4. Click on the sonde/probe icon in the upper toolbar.

5. Set the Comm port number to match the port the YSI 556 MPS is connected to. After this setup procedure, the following screen will be present on your PC monitor:



8.4.2 Uploading a .DAT File

1. Setup the instrument as described in Section *8.4.1 Upload Setup*.

2. Go to the YSI 556 MPS file screen as described in Section *8.1 Accessing the File Screen.*

3. Use the arrow keys to highlight the **Upload to PC** selection. See Figure 8.2 File Screen.

4. Press the **Enter** key. The file list screen is displayed. See Figure 8.3 File List Screen.

5. Use the arrow keys to highlight the DAT file that you wish to transfer and press **Enter**, both the YSI 556 MPS and PC displays show the progress of the file transfer.

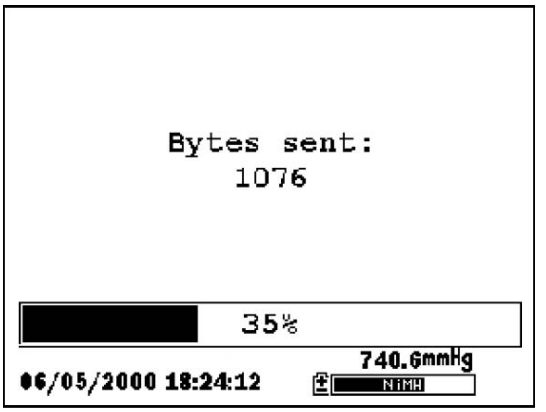
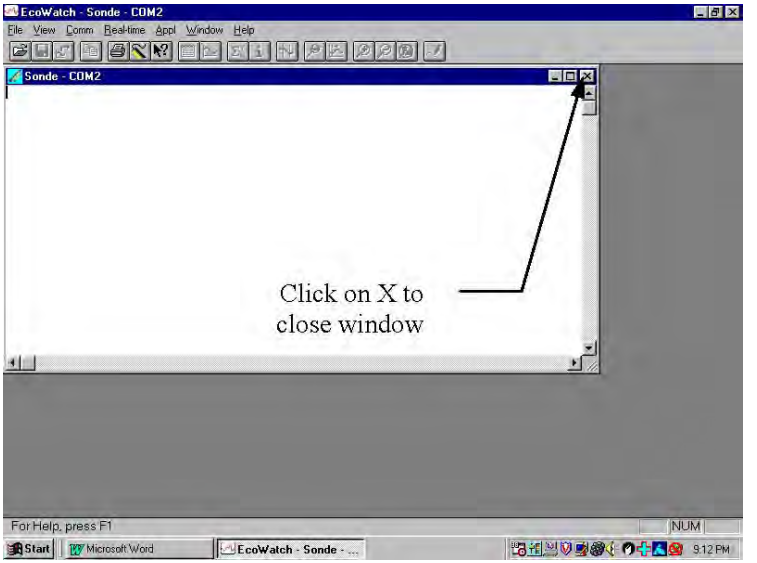


Figure 8.3 File Transfer Progress Screen

NOTE: After transfer, the file will be located in the C:\ECOWWIN\DATA folder of your PC, designated with a .DAT extension.

6. After the file transfer is complete, close the terminal window (small window on the PC) by clicking on the "X" at its upper right corner.



7. Press the **Escape** key on the YSI 556 MPS repeatedly to return

to the main menu screen.

8.4.3 Uploading a Calibration Record (.glp) File

For more information on the calibration record, refer to *Appendix H Calibration Record Information*.

1. Setup up the instrument as described in Section *8.4.1 Upload Setup*.

2. Go to the YSI 556 MPS file screen as described in Section

3. Use the arrow keys to highlight the Upload to PC selection. See Figure 8.2 File Screen.

4. Press the **Enter** key. The file list screen is displayed. See Figure 8.3 File List Screen.

5. Use the arrow keys to highlight the calibration record file that you wish to transfer and press **Enter.**

6. You will then be given a choice of uploading the file in three formats; **Binary, Comma & "" Delimited, and ASCII Text**.

   NOTE: The binary format is reserved for future YSI software packages.

7. Choose an option and press Enter, both the YSI 556 and PC displays show the progress of the file transfer.

   NOTE: After transfer, the file will be located in the C:\ECOWWIN\DATA folder of your PC, designated with the appropriate file extension.

   NOTE: To view the Calibration Record data after upload, simply open the .txt file in a general text editor such as Wordpad or Notepad.

8. After the file transfer is complete, close the terminal window (small window on the PC) by clicking on the "X" at its upper right corner.

9. Press the **Escape** key repeatedly to return to the main menu screen.

8.5 File Memory

1. Go to the file screen as described in Section *8.1 Accessing the File Screen*.

2. Use the arrow keys to highlight the **File memory** selection. See Figure 8.2 File Screen.

3. Press the **Enter** key. The file bytes used screen is displayed.

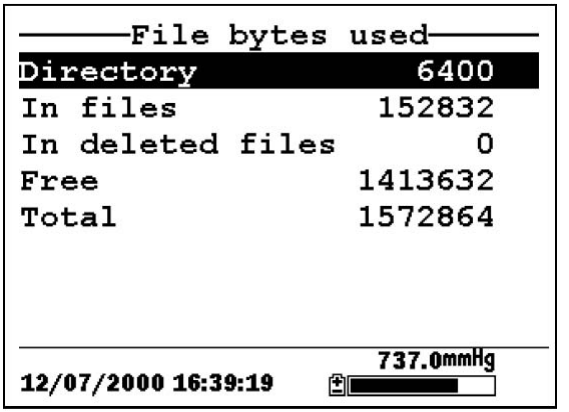


Figure 8.4 File Bytes Used Screen

4. The amount of free memory is listed in line 4 of the file bytes used screen.

   NOTE: If the amount of free memory is low, it may be time to delete all files (after first uploading all data to a PC). Refer to Section *8.6 Delete All Files*.

5. Press the **Escape** key repeatedly to return to the main menu screen.

8.6 Delete All Files

NOTE: It is not possible to delete individual files in order to free up memory. The only way to free up memory is to delete ALL files present. Take care to transfer all files to your computer (refer to Section 8.4 Upload to PC) before deleting them.

1. Go to the file screen as described in Section *8.1 Accessing the File Screen.*

2. Use the arrow keys to highlight the **Delete all files** selection. See Figure 8.2 File Screen.

3. Press the **Enter** key. The Delete all Files screen is displayed.

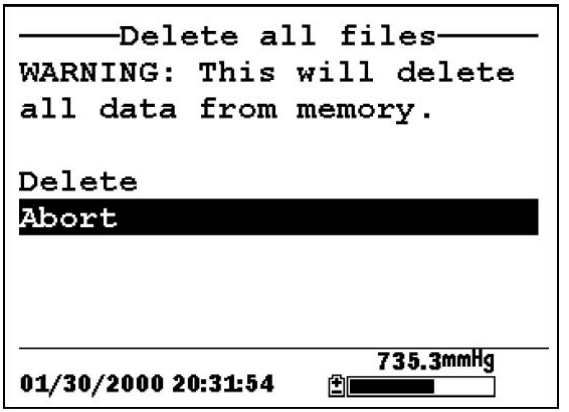


Figure 8.5 Delete All Files Screen

4. Use the arrow keys to highlight the **Delete** selection.

5. Press the **Enter** key.

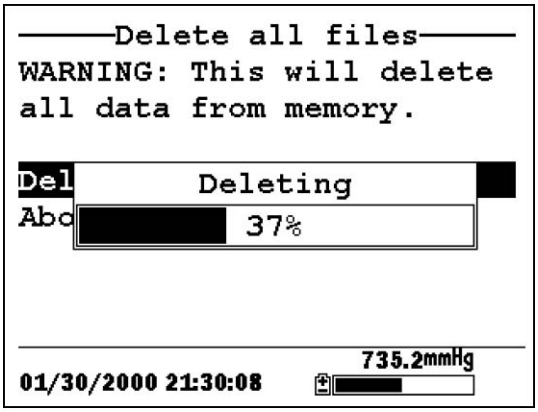


Figure 8.10 Deleting

The progress of file deletion is displayed in bar graph format.

NOTE: Deleting all files in the directory will not change any information in the site list.

6. Press the Escape key repeatedly to return to the main menu screen.

9. Logging

9.1 Accessing the Logging Setup Screen

1. Press the **On/off** key to display the run screen.
2. Press the **Escape** key to display the main menu screen.

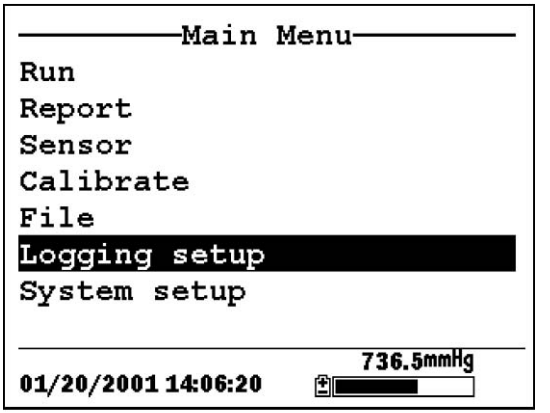


Figure 9.1 Main Menu

3. Use the arrow keys to highlight the **Logging setup** selection.
4. Press the **Enter** key. The logging setup screen is displayed.

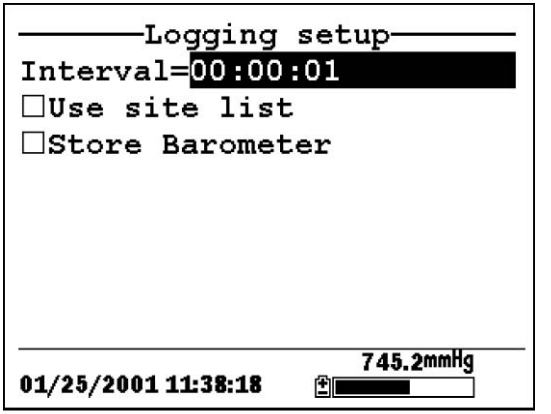


Figure 9.2 Setup Screen

9.2 Setting Logging Interval

Follow steps below to set the interval for logging a data stream.

NOTE: If you do not specify an interval, the instrument will use a default interval setting of 1 second.

NOTE: It is not necessary to set a logging interval when logging a single sample.

1. Go to the logging setup screen as described in Section *9.1 Accessing the Logging Setup Screen*.

2. Use the keypad to enter an interval between 1 second and 15 minutes. Refer to Section *2.9 Keypad Use*.

   NOTE: The interval field has hour, minute and second entry fields. Any entry over 1 hour will change automatically to a 15-minute setting.

3. ***P***ress the **Enter** key. The data stream interval is set.

4. Press the **Escape** key repeatedly to return to the main menu screen.

9.3 Storing Barometer Readings

NOTE: The **Store barometer** option is only available on instruments that are equipped with the optional barometer.

1. Go to the logging setup screen as described in Section *9.1 Accessing the Logging Setup Screen*.

2. Use the arrow keys to highlight the **Store barometer** selection. See Figure 9.2 Logging Setup Screen.

3. Press the **Enter** key until a check mark is entered in the box next to the store barometer selection if you want to log barometric readings.

OR press the **Enter** key until the box next to the barometer selection is empty if you do not want to log barometric readings.

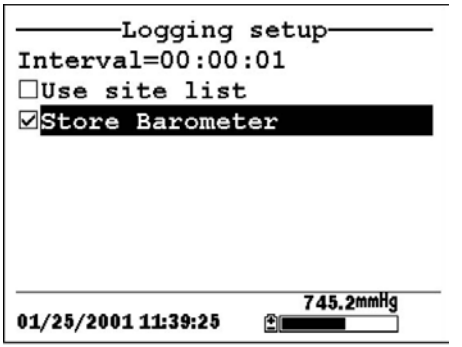


Figure 9.3 Store Barometer

4. Press the **Escape** key repeatedly to return to the main menu screen.

9.4 Creating a Site List

The site list option allows you to define file and site descriptions in the office or laboratory before moving to field logging studies. This is usually more convenient than entering the information at the site and is particularly valuable if you are visiting certain sites on a regular basis. The following section describes how to set up site lists which contain entries designated "Site Descriptions" that will be instantly available to the user in the field to facilitate the logging of data with pre-established naming of files and sites. There are two kinds of **Site Descriptions** available for use in Site lists:

• **Site Descriptions** associated with applications where data from a single site is always logged to a single file. This type is referred to as a "Single-Site Description" and is characterized by two parameters – a file name and a site name. Files logged to YSI 556 MPS memory under a **Single-Site Description** will be characterized primarily by the file name, but will also have the Site name attached, so that it is viewable in either the YSI 556 MPS **File directory** or in EcoWatch for Windows after upload to a PC

• **Site Descriptions** associated with applications where data from multiple sites are logged to a single file. This type is referred to as a "Multi-site Description" and is characterized by three parameters – a file name, a site name, and a site number. Files logged to YSI 556 MPS memory under a

Multi-site Description are characterized by a file name, but not a site name, since multiple sites are involved. However, each data point has a Site Number attached to it so that the user can easily determine the sampling site when viewing the data from the YSI 556 MPS **File** menu or processing the data in EcoWatch for Windows after upload to a PC.

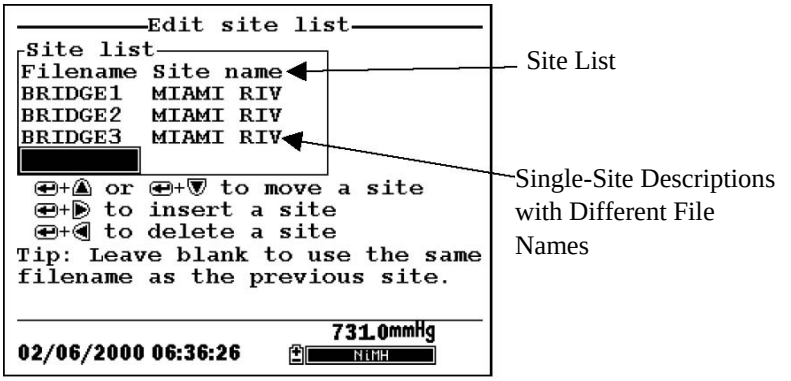


Figure 9.4 Single-Site Descriptions

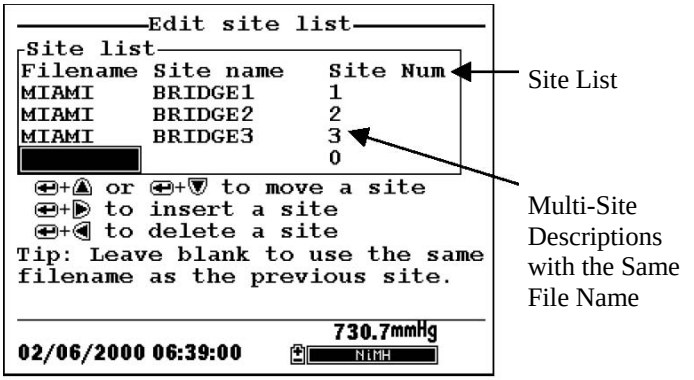


Figure 9.5 Multiple-Site Descriptions

NOTE: Site lists containing Single Site Descriptions are usually input with the designation **Store Site Number** INACTIVE in the YSI 556 MPS **Logging setup** menu. Thus, no site numbers appear in the first **Site list** example. Conversely, **Site lists** containing **Multi-Site Descriptions** MUST be input with the **Store Site Number** selection ACTIVE as shown in the second example.

To create a site list:

1. Go to the logging setup screen as described in Section *9.1 Accessing the Logging Setup Screen*.

2. Use the arrow keys to highlight the **Use site list** selection.

3. Press the **Enter** key. A check mark is entered in the box next to the use site list selection *and* two new entries appear on the logging setup screen. See Figure 9.6 Logging Setup Screen.

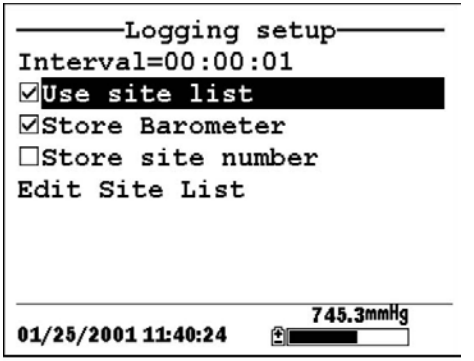


Figure 9.6 Logging Setup Screen

4. Use the arrow keys to highlight the **Store site number** selection.

5. If you are creating Multi-Site Descriptions (which require that the site **number** be stored in your data files), press the **Enter** key until a check mark appears in the box next to the store site number selection.

OR Press the **Enter** key until the box next to the store site number selection is empty, to create Single-Site Descriptions. The site **name** will be stored in the header of your data files.

6. Use the arrow keys to highlight the **Edit site list** selection.

7. Press the **Enter** key. The edit site list screen is displayed. See Figure 9.7 Edit Site List Screen. The **Filename** field is ready for input.

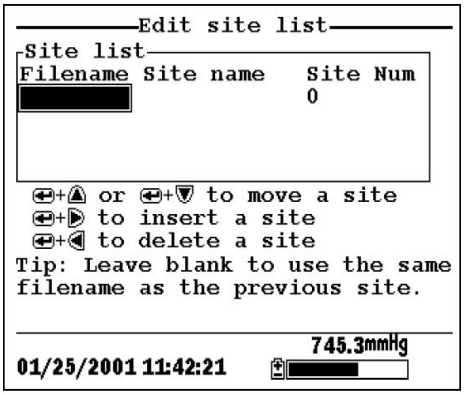


Figure 9.7 Edit Site List Screen

8. Use the keypad to enter a filename up to 8 characters in length. Refer to Section *2.9 Keypad Use*.

9. Press the **Enter** key. The cursor moves to the right for the entry of a **Site name**.

10. Use the keypad to enter a site name up to 11 characters in length. Refer to Section *2.9 Keypad Use*.

NOTE: If the store site number selection is *not* checked, skip to Step 13.

11. Press the **Enter** key. The cursor moves to the site number entry position.

12. Use the keypad to enter a site number up to 7 characters in length. Refer to Section *2.9 Keypad Use*.

13. Press **Enter**. The cursor moves to the next filename entry position.

14. Repeat Steps 8 to 13 until all filenames and sites have been entered.

15. Press **Escape** repeatedly to return to the main menu screen.

9.5 Editing a Site List

1. Go to the logging setup screen as described in Section *9.1 Accessing the Logging Setup Screen*.

2. Use the arrow keys to highlight the **Edit Site List** selection. See Figure 9.6 Logging Setup Screen.

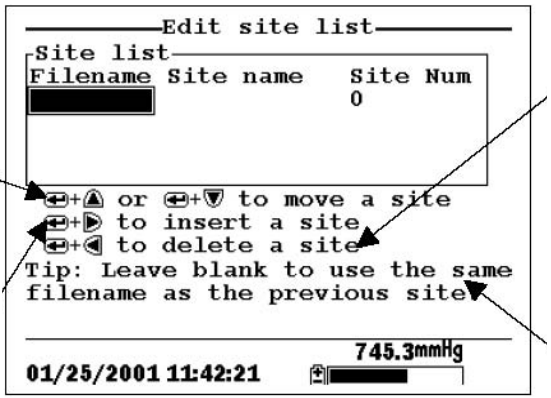
3. Press the **Enter** key. The edit site list screen is displayed.

4. Edit the site list using the keystrokes described below.

NOTE: Editing the site list will not have any effect on files stored in the instrument memory.

To MOVE a site:
Use the arrow keys to highlight a site. Press the Up or Down arrow key while holding down the Enter key.

To INSERT a site above another site:
Use the arrow keys to highlight the site. Press the Right arrow key while holding down the Enter key. Use keypad to input letters. Refer to Section 2.9 *Keypad Use.*



To DELETE a site:
Use the arrow keys to highlight a site. Press the Left arrow key while holding down the Enter key.

To use the same file name as the previous site: Leave the filename blank

Figure 9.1 Keystrokes for Editing Site List

9.6 Logging Data Without a Site List

1. Follow Steps 1 through 5 in Section 7.1 Real-Time Data.

2. Use the arrow keys to highlight the **Log one sample** selection on the run screen if only a single sample is being logged.

OR Use the arrow keys to highlight the **Start logging** selection on the run screen if a data stream is being logged.

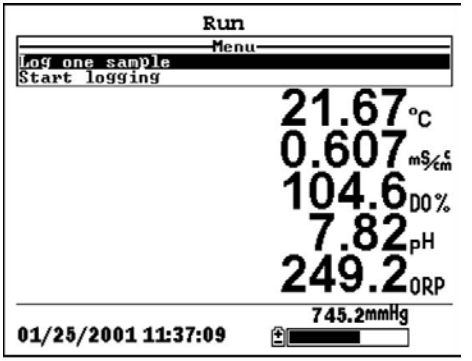


Figure 9.9 Run Screen

3. Press the **Enter** key. The Enter information screen is displayed.

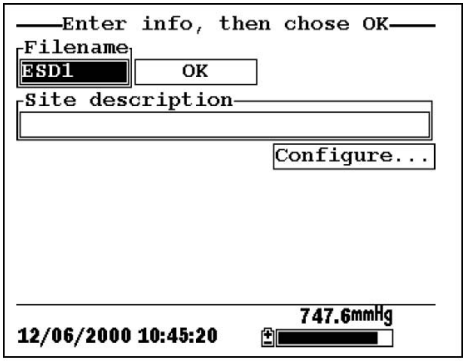


Figure 9.10 Enter Information Screen

NOTE: The last filename used will be displayed.

4. Use the keypad to enter a file name. Refer to Section *2.9 Keypad Use*.

NOTE: The instrument will assign a default file name of NONAME if no file name is specified.

5. Press the **Enter** key to input the file name.

6. Use the arrow keys to highlight the **Site description** field in the enter information screen.

   NOTE: Entering a Site Description is optional. You may leave the Site Description blank and skip to Step 9.

7. Use the keypad to enter a site description name. Refer to Section *2.9 Keypad Use*.

8. Press the **Enter** key to input the site description.

   NOTE: If you want to change the logging setup, such as sampling interval or storing the barometer reading, use the arrow keys to highlight the **Configure** field, press the **Enter** key, then refer to Section *9.2 Setting Logging Interval* or *9.3 Storing Barometer Readings* for details.

9. Use the arrow keys to highlight the **OK** field in the center of the information screen.

10. Press the **Enter** key to start logging.

    NOTE: If the parameter mismatch screen is displayed, refer to Section *9.8 Adding Data to Existing Files*.

11. If a single point is being logged, the header on the run screen changes momentarily from **Menu** to **Sample logged** to confirm that the point was successfully logged. Skip to Step

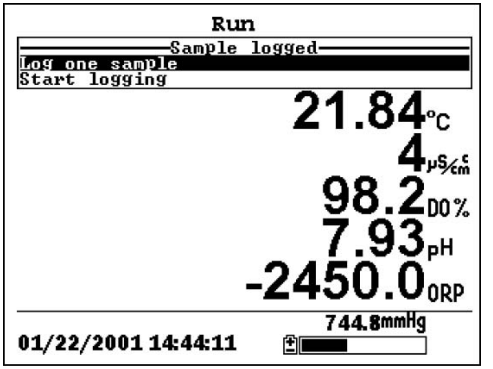


Figure 9.11 Sample Logged Screen

If a continuous stream of points is being logged, the start logging entry in the run screen changes from **Start logging** to **Stop logging**.

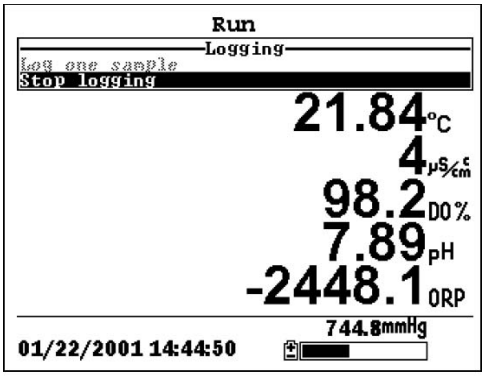


Figure 9.12 Logging Screen

12. At the end of the logging interval, press **Enter** to stop logging.

13. Refer to Section *8.3 View File* to view the data on the instrument display.

9.7 Logging Data with a Site List

1. If you have not already created a site list, refer to Section *9.4 Creating a Site List*.

2. Follow Steps 1 through 5 in Section 7.1 Real-Time Data.

3. Use the arrow keys to highlight the **Log one sample** selection on the run screen if only a single sample is being logged.

OR Use the arrow keys to highlight the **Start logging** selection on the run screen if a data stream is being logged. See Figure 9.9 Run Screen.

4. Press the **Enter** key. The Pick a site screen is displayed.

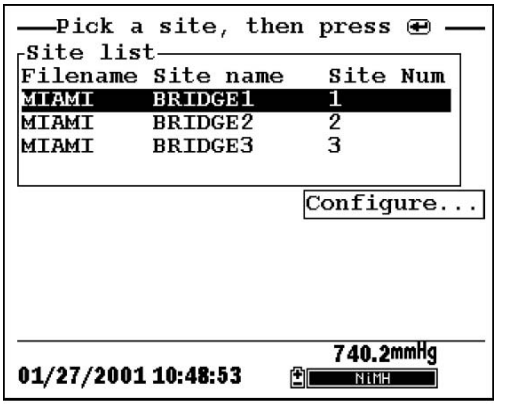


Figure 9.13 Pick a Site Screen

5. Use the arrow keys to highlight the **site** of your choice.

NOTE: If the site of your choice is grayed out in the site list, refer to Section *9.8 Adding Data to Existing Files.*

NOTE: Refer to Section *9.5 Editing a Site List* if you want to edit the site list.

6. Press the **Enter** key to start logging.

NOTE: If the parameter mismatch screen is displayed, refer to Section 9.8 Adding Data to Existing Files.

7. If a single point is being logged, the header on the run screen changes momentarily from **Menu** to **Sample logged** to confirm that the point was successfully logged. See Figure 9.11 Sample Logged Screen. Skip to Step 9.

If a continuous stream of points is being logged, the start logging entry in the run screen changes from **Start logging** to **Stop logging**. See Figure 9.12 Logging Screen.

8. At the end of the logging interval, press **Enter** to stop logging.

9. Refer to Section *8.3 View File* to view the data on the instrument display.

9.8 Adding Data to Existing Files

In order to add new data to an existing file, the current logging and sensor setup must be *exactly* the same as when the file was created. The following settings must be the same:

- **Sensors enabled** (refer to Section *4 Sensors*)
- **Store Barometer** (refer to Section *9.3 Storing Barometer Readings*)
- **Store Site Number** (refer to Section *9.4 Creating a Site List*)

If the current logging setup is not exactly the same as when the file was created, a parameter mismatch screen is displayed.

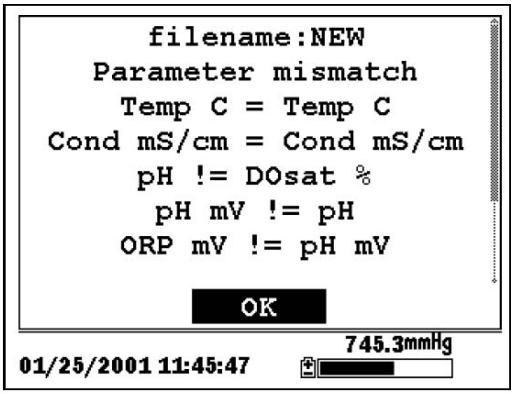


Figure 9.14 Parameter Mismatch Screen

NOTE: The right column shows parameters used when the file was created. The left column shows current parameters.

1. Press the **Down Arrow** key to scroll down and find the mismatch(es).

2. Use the following chart to resolve the mismatch(es).

Mismatch	Action	Reference
Sensor(s) missing from left column	Enable the missing sensor(s)	Section *4 Sensors*
Extra sensor(s) listed in left column	Disable the extra sensor(s)	Section *4 Sensors*
Barometer missing from left column, but present in right column	Enable the Store Barometer setting	Section *9.3 Storing Barometer Readings*
Barometer present in left column, but missing from right column	Disable the Store Barometer setting	Section *9.3 Storing Barometer Readings*
Store Site Number missing from left column, but present in right column	Enable the Store Site Number setting	Section *9.4 Creating a Site List*
Store Site Number present in left column, but missing from right column	Disable the Store Site Number setting	Section *9.4 Creating a Site List*

3. Return to Section *9.6 Logging Data without a Site List* or *9.7 Logging Data with a Site List*.

10. System Setup

The YSI 556 MPS has a number of features that are user-selectable or can be configured to meet the user's preferences. Most of these choices are found in the **System setup** menu.

10.1 Accessing the System Setup Screen

1. Press the **On/off** key to display the run screen. See Figure Front View of YSI 556 MPS.

2. Press the **Escape** key to display the main menu screen.

3. Use the arrow keys to highlight the **System setup** selection.

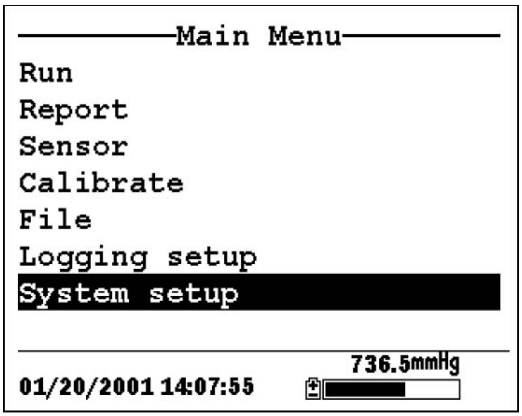


Figure 10.1 Main Menu

4. Press the **Enter** key. The system setup screen is displayed.

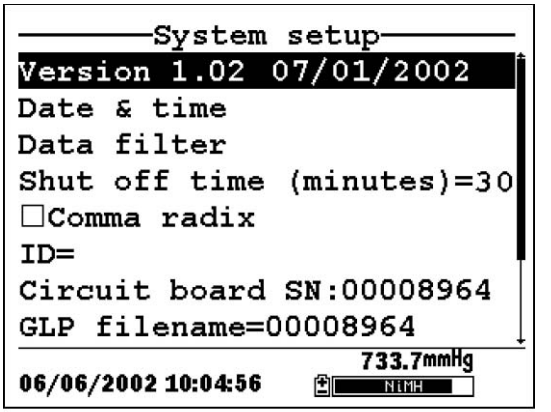


Figure 10.2 System Setup Screen

NOTE: The first line of the **System setup** menu shows the current software version of your YSI 556 MPS. As software enhancements are introduced, you will be able to upgrade your YSI 556 MPS from the YSI Web site. Refer to Section *11.2 Upgrading YSI 556 MPS* Software for details.

10.2 Language Setting

1. Go to the System Setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight **Language** on the System Setup screen. Press **Enter** to open the Language screen. .

3. Use the arrow keys to highlight your desired **Language**. Press **Enter**.

4. Press the Escape key repeatedly to return to the Main men

10.3 Date and Time Setup

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **Date & time** selection on the system setup screen. See Figure 10.2 System Setup Screen.

3. Press **Enter**. The date and time setup screen is displayed.

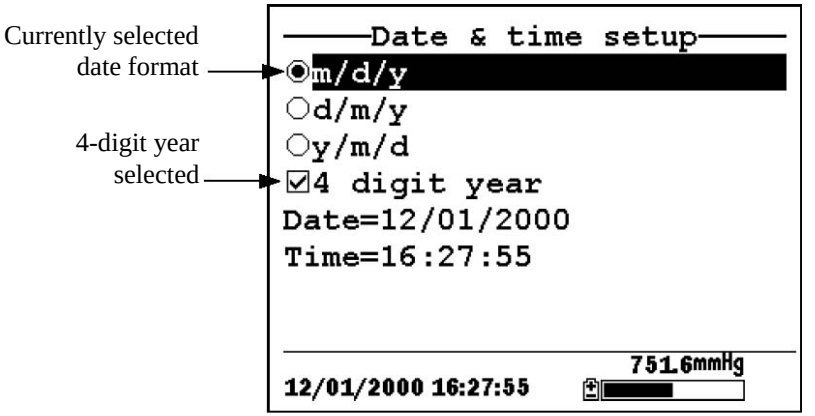


Figure 10.3 Date Setup Screen

NOTE: A black dot to the left of a date format indicates that format is selected.

4. Use the arrow keys to highlight your desired date format.

5. Press **Enter**.

6. Use the arrow keys to highlight the 4-digit year selection.

7. Press **Enter**. A check mark appears in the check box next to the 4-digit year selection.

   NOTE: If unchecked, a 2-digit year is used.

8. Use the arrow keys to highlight the **Date** selection.

9. Press **Enter**. A cursor appears over the first number in the date.

10. Enter the proper number from the keypad for the highlighted date digit. The cursor moves automatically to the next date digit. Refer to Section *2.9 Keypad Use* for more keypad information.

11. Repeat Step 10 until all date digits are correct.

12. Press **Enter** to input the specified date.

13. Use the arrow keys to highlight the **Time** selection.

14. Press **Enter**. A cursor appears over the first number in the time selection.

15. Enter the proper number from the keypad for the highlighted time digit. The cursor moves automatically to the next time digit.

NOTE: Use military format when entering time. For example, 2:00 PM is entered as 14:00.

16. Repeat Step 15 until all time digits are correct.

17. Press **Enter** to input the correct time.

18. Press the **Escape** key repeatedly to return to the Main menu screen.

10.4 Data Filter

The Data Filter is a software filter that eliminates sensor noise and provides more stable readings.

NOTE: YSI recommends using the default values for the data filter for most field applications.

However, users who are primarily interested in a fast response from their dissolved oxygen sensor should consider a change of the default time constant setting of 8 seconds to one of 2 seconds. This change can be made according to the instructions in Section *10.3.1 Changing the Data Filter Settings* below. The disadvantage of lowering the time constant is that field pH readings may appear somewhat noisy if the cable is in motion.

10.4.1 Changing the Data Filter Settings

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **Data filter** selection. See Figure 10.1 Main Menu.

3. Press the **Enter** key. The Data filter setup screen is displayed.

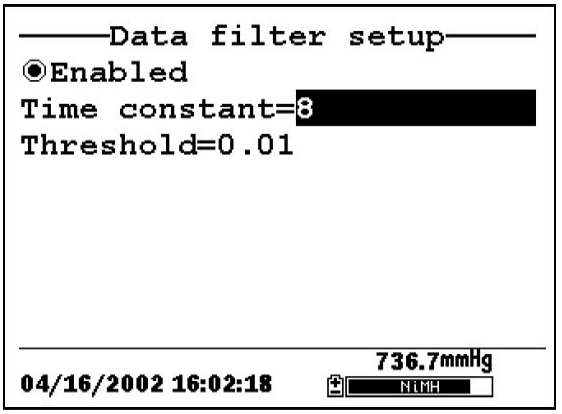


Figure 10.4 Data Filter Screen

4. With Enabled highlighted, press the **Enter** key to Enable or Disable the data filter. A black dot to the left of the selection indicates the data filter is enabled.

5. Use the arrow keys to highlight the **Time constant** field.

   NOTE: This value is the time constant in seconds for the software data filter. Increasing the time constant will result in greater filtering of the data, but will also slow down the apparent response of the sensors.

6. Use the keypad to enter a value. The default value is 8 and this value is ideal for most 556 field applications. As described in Section *10.3 Data Filter* above, users who wish to decrease the response time of the DO readings at the expense of some noise for the pH readings determined

concurrently, should change the Time Constant to a value of 2.

7. Press the **Enter** key to enter the time constant.

8. Use the arrow keys to highlight the **Threshold** field.

   NOTE: This value determines when the software data filter will engage/disengage, speeding the response to large changes in a reading. When the difference between two consecutive readings is larger than the threshold, then the reading is displayed unfiltered. When the difference between two consecutive readings drops below the threshold, readings will be filtered again.

9. Use the keypad to enter a value. The default value is 0.01.

10. Press the **Enter** key to enter the threshold.

11. Press the **Escape** key repeatedly to return to the Main menu screen.

10.5 Shutoff Time

The YSI 556 MPS shuts off automatically after 30 minutes of inactivity. The shut off time may be changed as described below.

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **Shutoff time** selection on the system setup screen. See Figure 10.2 System Setup Screen.

3. Use the keypad to enter a value from 0 to 60 minutes. The default value is 30.

   NOTE: To disable the automatic shutoff feature, enter a zero (0).

4. Press the **Enter** key to enter the correct shutoff time.

5. Press the **Escape** key repeatedly to return to the main menu screen.

10.6 Comma Radix

The user can toggle between a period (default) and comma for the radix mark by selecting this item and pressing the **Enter** key as follows:

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **Comma radix** selection on the system setup screen. See Figure 10.2 System Setup Screen.

3. Press the **Enter** key. A check mark appears in the check box next to the comma radix selection indicating that the radix mark is a comma.

10.7 ID

This selection allows you to enter an identification name/number for your YSI 556 MPS. This ID name/number is logged in the header of each file.

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **ID** selection. See Figure 10.1 Main Menu.

3. Use the keypad to enter an alphanumeric ID up to 15 characters in length. Refer to Section *2.9 Keypad Use*.

4. Press the **Enter** key to enter the ID.

5. Press the **Escape** key repeatedly to return to the main menu screen.

10.8 GLP Filename

This selection allows you to enter a different filename for the YSI 556 MPS Calibration Record file.

NOTE: The default filename is the "556 PC board Serial Number.glp."

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.
2. Use the arrow keys to highlight the **GLP Filename** selection. See Figure 10.1 Main Menu.
3. Use the keypad to enter a filename up to 8 characters in length. Refer to Section *2.9 Keypad Use*.
4. Press the **Enter** key to enter the new filename.
5. Press the **Escape** key repeatedly to return to the main menu screen.

10.9 TDS Constant

This selection allows you to set the constant used to calculate Total Dissolved Solids (TDS). TDS in g/L is calculated by multiplying this constant times the specific conductance in mS/cm.

10.9.1 Changing the TDS Constant

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.
2. Use the arrow keys to highlight the **TDS Constant** selection. See Figure 10.1 Main Menu.
3. Use the keypad to enter a value. Refer to Section *2.9 Keypad Use*. The default value is 0.65.
4. Press the **Enter** key to enter the correct TDS constant.
5. Press the **Escape** key repeatedly to return to the main menu screen.

10.10 Barometer Units

The following information is only for instruments with the barometer option.

1. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

2. Use the arrow keys to highlight the **Barometer units** selection on the system setup screen. See Figure 10.2 System Setup Screen.

3. Press the **Enter** key. The Barometer units screen will appear.

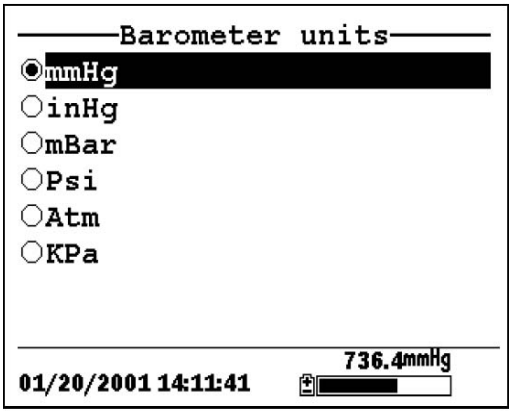


Figure 10.5 Data Filter Screen

A black dot indicates the currently selected units.

4. Use the arrow keys to highlight your desired barometric unit.

5. Press the **Enter** key to select your choice. A black dot will appear in the circle next to your selected units.

6. Press the **Escape** key repeatedly to return to the main menu screen.

10.11 Calibrate Barometer

The optional barometer has been factory calibrated to provide accurate readings. However, some sensor drift may occur over time, requiring occasional calibration by the user, as follows:

1. Determine your local barometric pressure from an independent laboratory barometer or from your local weather service.

2. If the barometric pressure (BP) reading is from your local weather station, reverse the equation that corrects it to sea level.

   NOTE: For this equation to be accurate, the barometric pressure units must be in mmHg.

   True BP = (Corrected BP) – [2.5 * (Local Altitude/100)]

3. Go to the system setup screen as described in Section *10.1 Accessing the System Setup Screen*.

4. Use the arrow keys to highlight the **Calibrate barometer** selection on the system setup screen. See Figure 10.2 System Setup Screen.

5. Press the **Enter** key. The Calibrate Barometer screen is displayed.

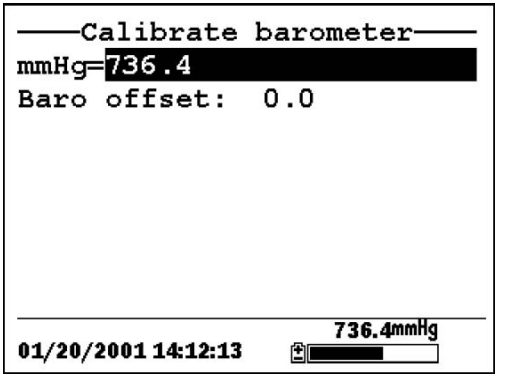


Figure 10.6 Barometer Calibration Screen

6. Use the keypad to input the known barometric pressure value as determined in Step 2.

7. Press the **Enter** key. The new barometer reading is displayed as well as the approximate offset from the factory reading.

   NOTE: To return the sensor to the factory setting, subtract the offset amount from the current setting and repeat Steps 5 to 7.

8. Press the **Escape** key repeatedly to return to the main menu screen.

11. Maintenance

11.1 Sensor Care and Maintenance

Once the sensors have been properly installed, remember that periodic cleaning and DO membrane changes are required.

11.1.1 DO Sensor

For best results, we recommend that the KCl solution and the membrane cap be changed at least once every 30 days.

1. It is important to recognize that oxygen dissolved in the sample is consumed during sensor operation. It is therefore essential that the sample be continuously stirred at the sensor tip. If stagnation occurs, your readings will be artificially low. Stirring may be accomplished by mechanically moving the sample around the sensor tip, or by rapidly moving the sensor through the sample. The rate of stirring should be at least 1 foot per second.

2. Membrane life depends on usage. Membranes will last a long time if installed properly and treated with care. Erratic readings are a result of loose, wrinkled, damaged, or fouled membranes, or from large (more than 1/8" diameter) bubbles in the electrolyte reservoir. If erratic readings or evidence of membrane damage occurs, you should replace the membrane and the electrolyte solution. The average replacement interval is two to four weeks.

3. If the membrane is coated with oxygen consuming (e.g. bacteria) or oxygen producing organisms (e.g. algae), erroneous readings may occur.

4. Chlorine, sulfur dioxide, nitric oxide, and nitrous oxide can affect readings by behaving like oxygen at the sensor. If you suspect erroneous readings, it may be necessary to determine if these gases are the cause.

5. Avoid any environment that contains substances that may attack the probe module and sensor materials. Some of these substances are concentrated acids, caustics, and strong solvents. The sensor materials that come in contact

with the sample include FEP Teflon, acrylic plastic, EPR rubber, stainless steel, epoxy, polyetherimide and the PVC cable covering.

6. It is possible for the silver anode, which is the entire silver body of the sensor, to become contaminated. This will prevent successful calibration. To restore the anode, refer to Section *11.1.1 DO Sensor, Silver Anode Cleaning.*

7. For correct sensor operation, the gold cathode must always be bright. If it is tarnished (which can result from contact with certain gases), or plated with silver (which can result from extended use with a loose or wrinkled membrane), the gold surface must be restored. To restore the cathode, refer to Section *11.1.1 DO Sensor, Gold Cathode Cleaning.*

8. To keep the electrolyte from drying out, store the sensor in the transport/calibration cup with at least 1/8″ of water.

Silver Anode Cleaning

After extended use, a thick layer of AgCl builds up on the silver anode reducing the sensitivity of the sensor. The anode must be cleaned to remove this layer and restore proper performance. The cleaning can be chemical or mechanical:

Chemical Cleaning: Remove the membrane cap and soak the entire anode section in a 14% ammonium hydroxide solution for 2 to 3 minutes, followed by a thorough rinsing with distilled or deionized water. The anode should then be thoroughly wiped with a wet paper towel to remove the residual layer from the anode.

Mechanical Cleaning: Sand off the dark layer from the silver anode with 400 grit wet/dry sandpaper. Wrap the sandpaper around the anode and twist the sensor. Rinse the anode with clean water after sanding, followed by wiping thoroughly with a wet paper towel.

NOTE: After cleaning, a new membrane cap must be installed. Refer to Section *3.4.3 Membrane Cap Installation***.**

Turn the instrument on and allow the system to stabilize for at least 30 minutes. If, after several hours, you are still unable to calibrate, contact your dealer or YSI Customer Service. Refer to *Appendix E Customer Service*.

Gold Cathode Cleaning

For correct sensor operation, the gold cathode must be textured properly. It can become tarnished or plated with silver after extended use. The gold cathode can be cleaned by using the adhesive backed sanding disc and tool provided in the YSI 5238 Probe Reconditioning Kit.

Using the sanding paper provided in the YSI 5238 Probe Reconditioning Kit, wet sand the gold with a twisting motion about 3 times or until all silver deposits are removed and the gold appears to have a matte finish. Rinse the cathode with clean water after sanding, followed by wiping thoroughly with a wet paper towel. If the cathode remains tarnished, contact your dealer or YSI Customer Service. Refer to *Appendix E Customer Service*.

NOTE: After cleaning, a new membrane cap must be installed. Refer to Section *3.4.3 Membrane Cap Installation***.**

11.1.2 DO Sensor Replacement

1. Remove the probe sensor guard.

⚠ **CAUTION:** Thoroughly dry the sensor so that no water enters the probe module sensor port when the sensor is removed.

2. Insert the long end of the hex key wrench into the small hole in the side of the probe module bulkhead. Turn the wrench counterclockwise and remove the screw. (You do not have to remove the screw all the way to release the sensor.)

3. Pull the old DO sensor module straight out of the probe module body.

   NOTE: The DO sensor is not threaded, it is keyed, so it cannot be removed by twisting.

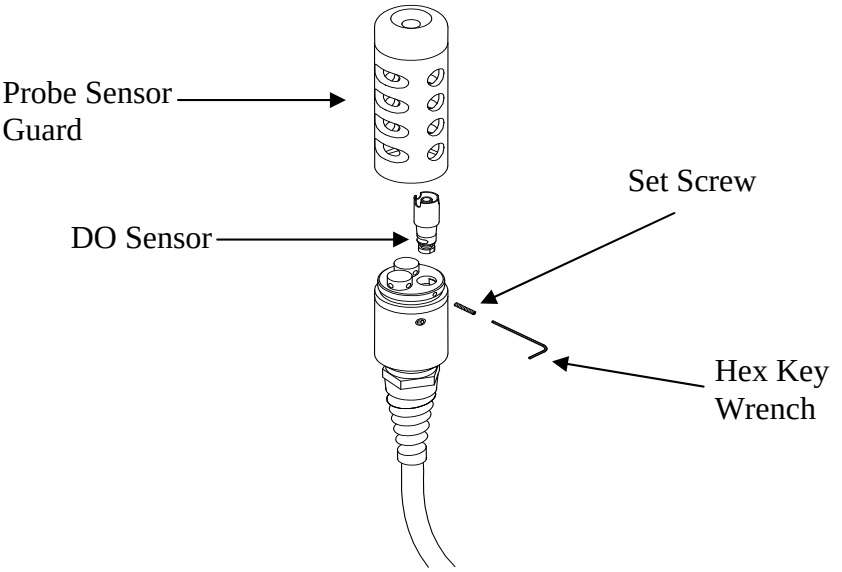


Figure 11.1 DO Sensor Replacement

4. Insert the new DO sensor module. Make sure that the inside of the probe module sensor port and the o-ring on the sensor are clean, with no contaminants, such as grease, dirt, or hair. The DO sensor is keyed, or has a flat side, so that it cannot be aligned improperly.

NOTE: Make sure the DO sensor bottoms out before the set screw is inserted.

5. Insert the set screw into the small hole in the side of the probe module bulkhead, and turn clockwise to rethread.

⚠ **CAUTION**: Make sure that you do not cross-thread the set screw. Use the hex key wrench to tighten the screw in properly, making sure that the screw does not stick out of the side of the probe module bulkhead. The probe sensor guard will not thread on properly and damage may result if the screw is allowed to stick out.

NOTE: The YSI 5563 DO sensor is shipped dry. A shipping membrane was installed to protect the electrode. A new membrane cap must be installed before the first use. Refer to Section 3.4.1 Sensor Installation.

11.1.3 YSI 5564 pH and 5565 Combination pH/ORP Sensor Cleaning

Cleaning is required whenever deposits or contaminants appear on the glass and/or platinum surfaces of these sensors or when the response of the sensor becomes slow.

1. Remove the sensor from the probe module.

2. Initially, simply use clean water and a soft clean cloth, lens cleaning tissue, or cotton swab to remove all foreign material from the glass bulb (YSI 5564 and YSI 5565) and platinum button (YSI 5565). Then use a moistened cotton swab to carefully remove any material that may be blocking the reference electrode junction of the sensor.

⚠ **CAUTION:** When using a cotton swab with the YSI 5564 or YSI 5565, be careful NOT to wedge the swab tip between the guard and the glass sensor. If necessary, remove cotton from the swab tip, so that the cotton can reach all parts of the sensor tip without stress.

NOTE: If good pH and/or ORP response is not restored by the above procedure, perform the following additional procedure:

1. Soak the sensor for 10-15 minutes in clean water containing a few drops of commercial dishwashing liquid.

2. GENTLY clean the glass bulb and platinum button by rubbing with a cotton swab soaked in the cleaning solution.

3. Rinse the sensor in clean water, wipe with a cotton swab saturated with clean water, and then re-rinse with clean water.

NOTE: If good pH and/or ORP response is still not restored by the above procedure, perform the following additional procedure:

1. Soak the sensor for 30-60 minutes in one molar (1 M) hydrochloric acid (HCl). This reagent can be purchased from most distributors. Be sure to follow the safety instructions included with the acid.

2. GENTLY clean the glass bulb and platinum button by rubbing with a cotton swab soaked in the acid.

3. Rinse the sensor in clean water, wipe with a cotton swab saturated with clean water, and then re-rinse with clean water. To be certain that all traces of the acid are removed from the sensor crevices, soak the sensor in clean water for about an hour with occasional stirring.

NOTE: If biological contamination of the reference junction is suspected or if good response is not restored by the above procedures, perform the following additional cleaning step:

1. Soak the sensor for approximately 1 hour in a 1 to 1 dilution of commercially available chlorine bleach.

2. Rinse the sensor with clean water and then soak for at least 1 hour in clean water with occasional stirring to remove residual bleach from the junction. (If possible, soak the sensor for period of time longer than 1 hour in order to be certain that all traces of chlorine bleach are removed.) Then re-rinse the sensor with clean water and retest.`

11.1.4 Temperature/Conductivity Sensor Cleaning

The single most important requirement for accurate and reproducible results in conductivity measurement is a clean cell. A dirty cell will change the conductivity of a solution by contaminating it. The small cleaning brush included in the YSI 5511 Maintenance Kit is ideal for this purpose.

To clean the conductivity cell:

1. Dip the brush in clean water and insert it into each hole 1520 times.

2. Rinse the cell thoroughly in deionized or clean tap water.

NOTE: In the event that deposits have formed on the electrodes, perform the following additional procedure:

1. Use a mild detergent solution in combination with the brush. Dip the brush in the solution and insert it into each hole 1520 times.

2. Rinse the cell thoroughly in deionized or clean tap water.

   NOTE: After cleaning, check the response and accuracy of the conductivity cell with a calibration standard.

   NOTE: If this procedure is unsuccessful, or if sensor performance is impaired, it may be necessary to return the sensor to a YSI authorized service center for service, Refer to *Appendix E Customer Service*.

   The temperature portion of the sensor requires no maintenance.

11.2 Upgrading YSI 556 MPS Software

1. Access the YSI Environmental Software Downloads page as described in *Appendix G EcoWatch* Step 1 through 3.

2. Click on the **YSI Instruments Software Updates** link (or scroll down until you see YSI 556 MPS).

3. Click on the file icon to the right of the **YSI 556 MPS** listing and save the file to a temporary directory on your computer.

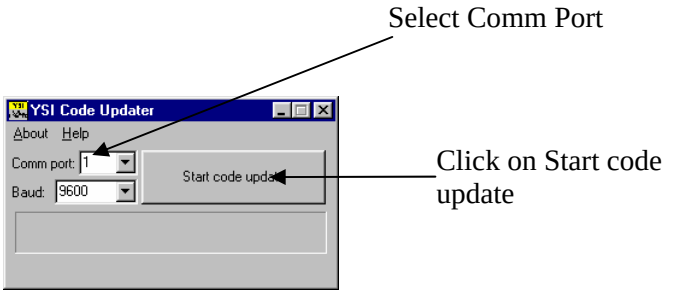
4. After the download is complete, run the file (that you just downloaded) and follow the on screen instructions to install the YSI Code Updater on your computer. If you encounter difficulties, contact YSI customer service for advice. Refer to *Appendix E Customer Service*.

5. If necessary, disconnect the YSI 5563 Probe Module from the YSI 556 MPS instrument.

6. Connect the YSI 556 MPS to a serial port of your computer via the 655173 PC interface cable. See Figure 8.6 Computer/Instrument Interface.

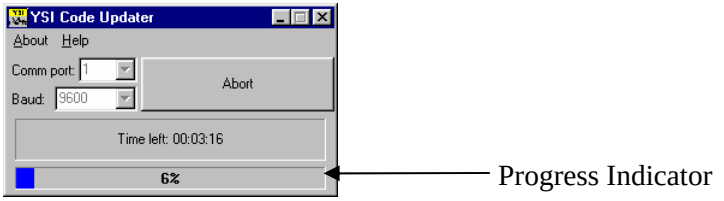
7. Press the **On/off** key on the YSI 556 MPS to display the run screen.

8. Run the YSI Code Updater software that you just installed on your computer. The following window will be displayed:

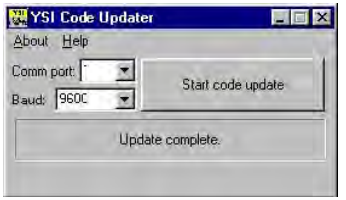


9. Set the Comm port number to match the port that you connected the 655173 PC Interface Cable to, then click on the Start Code Update button.

The YSI 556 MPS screen will blank out and a progress indicator will be displayed on the PC.



When the update is finished (indicated on the PC screen), the YSI 556 MPS will return to the Run screen. See Figure 7.1 Run Screen.



10. Close the YSI Code Updater window (on the PC) by clicking on the "X" in the upper right corner of the window.

11. Disconnect the YSI 556 MPS from the 655173 PC interface cable and reconnect it to the YSI 5563 Probe Module. Refer to Section *3.6 Instrument/Cable Connection*.

12. Storage

Proper storage between periods of usage will not only extend the life of the sensors, but will also ensure that the unit will be ready to use as quickly as possible in your next application.

12.1 General Recommendations for Short Term Storage

No matter what sensors are installed in the instrument, it is important to keep them moist without actually immersing them in liquid. Immersing them could cause some of them to drift or result in a shorter lifetime.

YSI recommends that short term storage of all multi-parameter instruments be done by placing approximately 1/2 inch of tap water in the transport/calibration cup that was supplied with the instrument, and by placing the probe module with all of the sensors installed into the cup. The use of a moist sponge instead of a 1/2 inch of tap water is also acceptable, as long as its presence does not compromise the attachment of the cup to the probe module. The transport/calibration cup should be sealed to prevent evaporation.

NOTE: Ensure that an o-ring is installed in the o-ring groove on the threaded end of the probe module body. See Figure 3.7 Transport/Calibration Cup Installation.

⚠ **CAUTION**: The water level has to be low enough so that none of the sensors are actually under water. Check the transport/calibration cup periodically to make certain that the water is still present or the sponge is still moist.

NOTE: If the storage water (tap water) is accidentally lost during field use, environmental water can be used.

12.2 General Recommendations for Long Term Storage

12.2.1 Probe Module Storage

1. Remove the pH or pH/ORP sensor from the probe module and store according to the individual sensor storage instructions found in Section *12.2.2 Sensor Storage*.

2. Seal the empty port with the provided port plug.

   NOTE: Leave the conductivity/temperature sensor and

dissolved oxygen sensor, with membrane cap still on, in the probe module.

3. Place 1/2″ of water, deionized, distilled or tap, in the transport/calibration cup.

⚠ **CAUTION:** The water level has to be low enough so that none of the sensors are actually under water. Check the transport/calibration cup periodically to make certain that the water is still present or the sponge is still moist.

4. Insert the probe module into the cup.

NOTE: Ensure that an o-ring is installed in the o-ring groove on the threaded end of the probe module body. See Figure 3.7 Transport/Calibration Cup Installation.

12.2.2 Sensor Storage

Temperature/Conductivity Sensor

No special precautions are required. Sensor can be stored dry or wet, as long as solutions in contact with the thermistor and conductivity electrodes are not corrosive (for example, chlorine bleach). However, it is recommended that the sensor be cleaned with the provided brush prior to long term storage. Refer to Section *11.1.4 Temperature/Conductivity Sensor Cleaning.*

pH and Combination pH/ORP Sensor

The key to sensor storage is to make certain that the reference electrode junction does not dry out. Junctions which have been allowed to dry out due to improper storage procedures can usually be rehydrated by soaking the sensor for several hours (overnight is recommended) in a solution which is 2 molar in potassium chloride. If potassium chloride solution is not available, soaking the sensor in tap water or commercial pH buffers may restore sensor function. However in some cases the sensor may have been irreparably damaged by the dehydration and will require replacement.

⚠ **CAUTION:** Do not store the sensor in distilled or deionized water as the glass sensor may be damaged by exposure to this medium.

1. Remove the pH or pH/ORP sensor from the probe module.

2. Seal the empty port with the provided port plug.

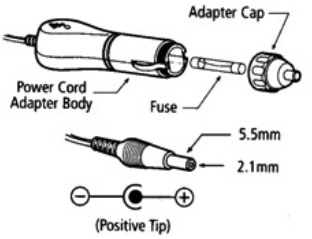
3. Place the sensor in the storage vessel (plastic boot or bottle) which was on the sensor at delivery. The vessel should contain a solution which is 2 molar in potassium chloride.

   NOTE: Make certain that the vessel is sealed to prevent evaporation of the storage solution.

13. Troubleshooting

The following sections describe problems you may encounter when using the YSI 556 MPS and provides suggestions to overcome the symptom.

PROBLEM	POSSIBLE SOLUTION
Display Problems	
No display is visible after pressing the on/off key.	If C cells are used, make certain that they are installed properly with regard to polarity and that good batteries are used. If a rechargeable battery pack is used, place the pack in the instrument and charge for 30 minutes.
Instrument software appears to be locked up as evidenced by no response to keypad entries or display not changing.	First, attempt to reset the instrument by simply turning off and then on again. If this fails, remove battery power from the instrument for 30 seconds and then reapply power. When using C cells, remove the battery lid and one of the batteries; when using the rechargeable battery pack, remove the pack completely from the instrument. After 30 seconds replace the battery or battery pack and check for instrument function.
The 556 display flashes and the instrument speaker makes a continuous clicking sound.	The battery voltage is low. Change to new C cells or recharge the 6117 battery pack.
Water Damage to Instrument	
Leakage detected in battery compartment when using C cells.	Dispose of batteries properly. Dry the battery compartment using compressed air if possible. If corrosion is present on battery terminals, contact YSI Customer Service.
Water has contacted rechargeable battery pack.	Remove battery pack immediately. Send battery pack to YSI Product Service for evaluation. **CAUTION**: DO NOT REUSE BATTERY PACK UNTIL YSI PRODUCT SERVICE HAS EVALUATED IT.
Leakage suspected into the main cavity of the instrument case.	Remove the batteries immediately. Return the instrument to YSI Product Service.

PROBLEM	POSSIBLE SOLUTIONS
Optional Cigarette Lighten Charger	
Power cord fuse blown.  	1. Unscrew adapter's cap, remove tip and pull out fuse. 2. Replace fuse with a new 2-amp fast-blow fuse from an electronics store such as Radio Shack. 3. Reassemble the adapter and securely screw the cap back onto the adapter body.
File Problems	
Upload of files from YSI 556 MPS to PC fails	1. Make sure that cable is connected properly to both 556 and PC. 2. Make certain that the proper Comm port is selected in EcoWatch for Windows.
Barometer data is not stored with sensor data file.	Make sure **Store barometer** is active in the 556 **Logging setup** menu.
Site Descriptions in the **Site List** are "grayed-out" and not available for appending files with additional data.	There is a parameter mismatch between the current 556 setup and that initially used. Change the current logging and sensor setup to match the setup that was initially used to create the file.
Sensor Problems	
Dissolved Oxygen reading is unstable or inaccurate. Out of Range message appears during calibration.	Sensor not properly calibrated. Follow DO cal procedures.
	Membrane not properly installed or may be punctured. Replace membrane cap.
	DO sensor electrodes require cleaning. Follow DO cleaning procedure. Use 5511 Maintenance kit.
	Water in sensor connector. Dry connector; reinstall sensor.
	Algae or other contaminant clinging to DO sensor. Rinse DO sensor with clean water.
	Barometric pressure entry is incorrect. Repeat DO cal procedure.
	Calibrated at extreme temperature. Recalibrate at (or near) sample temperature.
	DO sensor has been damaged. Replace sensor.
	Internal failure. Return probe module for service.

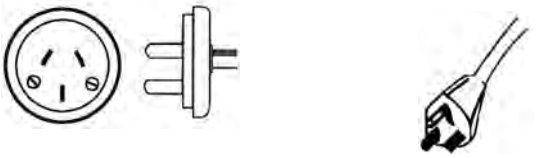
PROBLEM	POSSIBLE SOLUTIONS
Sensor Problems	
pH or ORP readings are unstable or inaccurate. Out of Range message appears during calibration.	Sensor requires cleaning. Follow sensor cleaning procedure.
	Sensor requires calibration. Follow cal procedures.
	pH sensor reference junction has dried out from improper storage. Soak sensor in tap water or buffer 4 until readings become stable.
	Water in sensor connector. Dry connector; reinstall sensor.
	Sensor has been damaged. Replace sensor.
	Calibration solutions out of spec or contaminated with other solution. Use new calibration solutions
	ORP fails Zobell check. Take into account temperature dependence of Zobell solution readings.
	Internal failure. Return probe module for service.
Conductivity unstable or inaccurate. Out of Range message appears during calibration	Conductivity improperly calibrated. Follow calibration procedure.
	Conductivity sensor requires cleaning. Follow cleaning procedure.
	Conductivity sensor damaged. Replace sensor.
	Calibration solution out of spec or contaminated. Use new calibration solution.
	Internal failure. Return probe module for service.
	Calibration solution or sample does not cover entire sensor. Immerse sensor fully.
Temperature, unstable or inaccurate	Water in connector. Dry connector; reinstall sensor.
	Sensor has been damaged. Replace the 5560 sensor.
Installed sensor has no reading	The sensor has been disabled. Enable sensor.
	Water in sensor connector. Dry connector; reinstall sensor.
	Sensor has been damaged. Replace sensor.
	Report output improperly set up. Set up report output.
	Internal failure. Return probe module for service.

If these guidelines and tips fail to correct your problem or if any other symptoms occur, contact YSI Customer Service for Advice. Refer to *Appendix E Customer Service*.

14. Appendix A YSI 556 MPS Specifications

For the most recent product specifications, please visit the YSI website: www.ysi.com

15. Appendix B Instrument Accessories

ITEM #	ACCESSORY
5563-4	4m Cable with DO/temp/conductivity
5563-10	10m Cable with DO/temp/conductivity
5563-20	20m Cable with DO/temp/conductivity
5564	pH Kit
5565	pH/ORP Kit
6118	Rechargeable Battery Pack Kit for use in US
5094	Rechargeable Battery Pack Kit with universal charger and three adapter cables for use in international applications
5095	Rechargeable Battery Pack Kit with universal charger and two adapter cables for use in international applications 
5083	Flow Cell – probe module is secured in the flow cell and groundwater is pumped through it. Displaced volume approx. 475 ml
3059	Flow Cell, low volume. Displaced volume approx. 200 ml
116505	Battery Lid
616	Charger, Cigarette Lighter – used to power up the instrument from a car's cigarette lighter
4654	Tripod
614	Ultra Clamp, C Clamp –used to clamp the instrument to a table top or car dashboard
6081	Large Carrying Case, Hard-sided
5085	Hands-free Harness
5065	Carrying Case, Form-fitted, for use in the field – has a clear vinyl window, shoulder strap, belt loop strap and hand strap

16. Appendix C Required Federal Communications Notice

The Federal Communications Commission defines this product as a computing device and requires the following notice.

This equipment generates and uses radio frequency energy and if not installed and used properly, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A or Class B computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No.0004-000-00345-4.

17. Appendix D Health Safety

YSI Conductivity Solutions: 3161, 3163, 3165, 3167, 3168, 3169

INGREDIENTS:
- Iodine
- Potassium Chloride
- Water

WARNING: INHALATION MAY BE FATAL

⚠ ***CAUTION:*** **AVOID INHALATION, SKIN CONTACT, EYE CONTACT OR INGESTION. MAY EVOLVE TOXIC FUMES IN FIRE.**

Harmful if ingested or inhaled. Skin or eye contact may cause irritation. Has a corrosive effect on the gastro-intestinal tract, causing abdominal pain, vomiting, and diarrhea. Hyper-sensitivity may cause conjunctivitis, bronchitis, skin rashes etc. Evidence of reproductive effects.

FIRST AID:
INHALATION: Remove victim from exposure area. Keep warm and rest. In severe cases seek medical attention.
SKIN CONTACT: Remove contaminated cloth immediately. Wash affected area thoroughly with large amounts of water. In severe cases seek medical attention.
EYE CONTACT: Wash eyes immediately with large amounts of water, (approx. 10 minutes). Seek medical attention immediately.
INGESTION: Wash out mouth thoroughly with large amounts of water. Seek medical attention immediately.

YSI pH 4.00, 7.00, y 10.00: 3821, 3822, 3823

pH 4 INGREDIENTS:

- Potassium Hydrogen Phthalate
- Formaldehyde
- Water

pH 7 INGREDIENTS:

- Sodium Phosphate, Dibasic
- Potassium Phosphate, Monobasic
- Water

pH 10 INGREDIENTS:

- Potassium Borate, Tetra
- Potassium Carbonate
- Potassium Hydroxide
- Sodium (di) Ethylenediamine Tetraacetate
- Water

⚠ **CAUTION -AVOID INHALATION, SKIN CONTACT, EYE CONTACT OR INGESTION. MAY AFFECT MUCOUS MEMBRANES.**

Inhalation may cause severe irritation and be harmful. Skin contact may cause irritation; prolonged or repeated exposure may cause Dermatitis. Eye contact may cause irritation or conjunctivitis. Ingestion may cause nausea, vomiting and diarrhea.

FIRST AID:
INHALATION – Remove victim from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep victim warm and at rest. Seek medical attention immediately.
SKIN CONTACT – Remove contaminated clothing immediately. Wash affected area with soap or mild detergent and large amounts of water (approx. 15-20 minutes). Seek medical attention immediately.
EYE CONTACT - Wash eyes immediately with large amounts of water (approx. 15-20 minutes), occasionally lifting upper and lower lids. Seek medical attention immediately.

INGESTION – If victim is conscious, immediately give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Seek medical attention immediately.

YSI Zobell Solution: 3682

INGREDIENTS:

- Potassium Chloride
- Potassium Ferrocyanide Trihydrate
- Potassium Ferricyanide

⚠ **CAUTION -AVOID INHALATION, SKIN CONTACT, EYE CONTACT OR INGESTION. MAY AFFECT MUCOUS MEMBRANES.**

May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract. The chemical, physical, and toxicological properties have not been thoroughly investigated.

Ingestion of large quantities can cause weakness, gastrointestinal irritation and circulatory disturbances.

FIRST AID:
INHALATION – Remove victim from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep victim warm and at rest. Seek medical attention immediately.
SKIN CONTACT – Remove contaminated clothing immediately. Wash affected area with soap or mild detergent and large amounts of water (approx. 15-20 minutes). Seek medical attention immediately.
EYE CONTACT - Wash eyes immediately with large amounts of water (approx. 15-20 minutes), occasionally lifting upper and lower lids. Seek medical attention immediately.
INGESTION – If victim is conscious, immediately give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Seek medical attention immediately.

18. Appendix E Customer Service

18.1 Ordering and Technical Support

Telephone:	800 897 4151 (US)
	+1 937 767 7241 (Globally)
	Monday through Friday, 8:00 AM to 5:00 ET
Fax:	+1 937 767 9353 (orders)
	+1 937 767 1058 (technical support)
Email:	environmental@ysi.com or proseries@ysi.com
Mail:	YSI Incorporated
	1725 Brannum Lane
	Yellow Springs, OH 45387 USA
Website:	www.ysi.com

18.2 YSI Authorized Service Centers

YSI has authorized service centers throughout the United States and Internationally. For the nearest service center information, please visit www.ysi.com and click ‘Support’ or contact YSI Technical Support directly at 800-897-4151.

When returning a product for service, include the Product Return form with cleaning certification. The form must be completely filled out for a YSI Service Center to accept the instrument for service. The form may be downloaded from www.ysi.com by clicking on the ‘Support” tab, then the Product Return Form button.

18.3 Cleaning Instructions

Equipment exposed to biological, radioactive, or toxic materials must be cleaned and disinfected before being serviced. Biological contamination is presumed for any instrument, probe, or other device that has been used with body fluids or tissues, or with wastewater. Radioactive contamination is presumed for any instrument, probe or other device that has been used near any radioactive source.

If an instrument, probe, or other part is returned or presented for service without a Cleaning Certificate, and if in our opinion it represents a potential

biological or radioactive hazard, our service personnel reserve the right to withhold service until appropriate cleaning, decontamination, and certification has been completed. We will contact the sender for instructions as to the disposition of the equipment. Disposition costs will be the responsibility of the sender.

When service is required, either at the user's facility or at a YSI Service Center, the following steps must be taken to ensure the safety of service personnel.

- In a manner appropriate to each device, decontaminate all exposed surfaces, including any containers. 70% isopropyl alcohol or a solution of 1/4-cup bleach to 1-gallon tap water is suitable for most disinfecting. Instruments used with wastewater may be disinfected with .5% Lysol if this is more convenient to the user.
- The user shall take normal precautions to prevent radioactive contamination and must use appropriate decontamination procedures should exposure occur.
- If exposure has occurred, the customer must certify that decontamination has been accomplished and that no radioactivity is detectable by survey equipment.
- Any product being returned to the YSI Repair Center should be packed securely to prevent damage.
- Cleaning must be completed and certified on any product before returning it to YSI.

18.4 Packing Procedure

- Clean and decontaminate items to ensure the safety of the handler.
- Complete and include the Cleaning Certificate.
- Place the product in a plastic bag to keep out dirt and packing material.
- Use a large carton, preferably the original, and surround the product completely with packing material.
- Insure for the replacement value of the product.

18.5 Warranty

The instrument is warranted for three years against defects in workmanship and materials when used for its intended purposes and maintained according to instructions. The probe module and cables are warranted for one year. The dissolved oxygen, temperature/conductivity, pH, and pH/ORP combination sensors are warranted for one year. Damage due to accidents, misuse, tampering, or failure to perform prescribed maintenance is not covered. The warranty period for chemicals and reagents is determined by the expiration date printed on their labels. Within the warranty period, YSI will repair or replace, at its sole discretion, free of charge, any product that YSI determines to be covered by this warranty.

To exercise this warranty, write or call your local YSI representative, or contact YSI Customer Service in Yellow Springs, Ohio. Send the product and proof of purchase, transportation prepaid, to the Authorized Service Center selected by YSI. Repair or replacement will be made and the product returned transportation prepaid. Repaired or replaced products are warranted for the balance of the original warranty period, or at least 90 days from date of repair or replacement.

Limitation of Warranty

This Warranty does not apply to any YSI product damage or failure caused by (i) failure to install, operate or use the product in accordance with YSI's written instructions, (ii) abuse or misuse of the product, (iii) failure to maintain the product in accordance with YSI's written instructions or standard industry procedure, (iv) any improper repairs to the product, (v) use by you of defective or improper components or parts in servicing or repairing the product, or (vi) modification of the product in any way not expressly authorized by YSI.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. YSI'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, AND THIS SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY. IN NO EVENT SHALL YSI BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY.

19. Appendix F Ferrite Bead Installation

⚠ **WARNING:** If you are using your YSI 556 in a European Community (CE) country or in Australia or New Zealand, you must attach a ferrite bead to the 655173 PC Interface Cable and the YSI 6117 Charger Adapter Cable in order to comply with the Residential, Commercial and Light Industrial Class B Limits for radio-frequency emissions specified in EN55011 (CISPR11) for Industrial, Scientific and Medical laboratory equipment. These ferrite assemblies are supplied as part of cable kits.

1. Make a small loop (approximately 5 cm in diameter) in the cable near the YSI 556 MS-19 connector.

2. Lay the open ferrite bead assembly under the loop with the cable cross-over position within the cylinder of the ferrite bead.

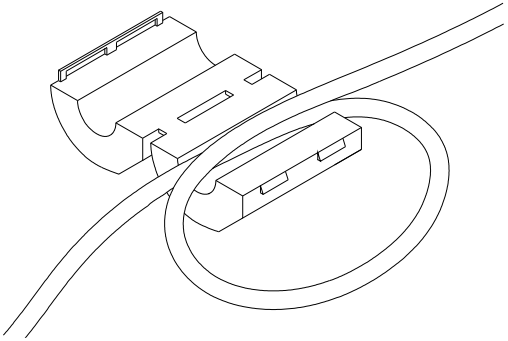


Figure 19.1 Ferrite Bead Installation

3. Snap the two pieces of the bead together making certain that the tabs lock securely.

4. When the installation is complete, the 655173 and 6117 cables should resemble the following drawings.

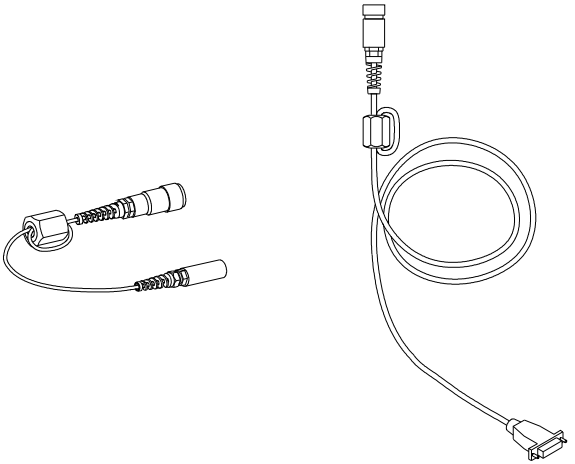


Figure 19.2 Cables with Ferrite Beads

20. Appendix G EcoWatch

EcoWatch™ for Windows™ must be used as the PC software interface to the YSI 556 MPS. EcoWatch is a powerful tool that can also be used with YSI 6-series sondes. Many features of the software will only be utilized by advanced users or are not relevant to the 556 MPS at all. This section is designed in tutorial format to familiarize you with the commonly used features of EcoWatch so that it will be possible to:

- Upload data from a 556 MPS to a PC
- Assemble plots and reports of your data
- Zoom in on certain segments of the plots of your data to facilitate analysis
- Show statistical data for your studies
- Export data in spreadsheet-compatible formats
- Print plots and reports

The advanced features of EcoWatch can be explored by downloading a 6-series manual from the YSI Web Site (www.ysi.com), purchasing a hard copy of the manual through YSI Customer Service (Item # 069300), or utilizing the on-line help feature of the software.

20.1 Installing EcoWatch for Windows

EcoWatch for Windows is available at no cost via a download from the YSI Web Site – www.ysi.com

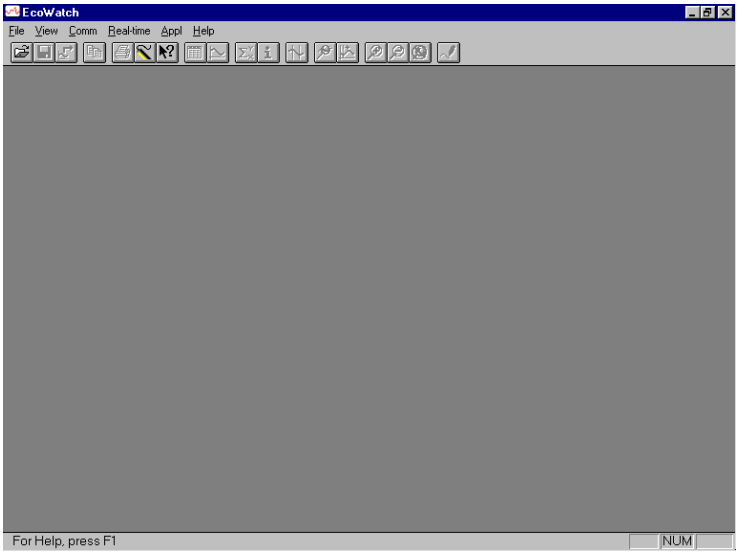
20.2 EcoWatch Tutorial

This EcoWatch tutorial is designed to teach you the commonly used operations associated with the software when used with your 556 MPS.

After you have uploaded a file, Refer to Section 8.4 Upload to PC, you will see two files in the C:\ECOWWIN\DATA directory; the file you transferred and a file supplied by YSI designated SAMPLE.DAT. This SAMPLE.DAT file is referred to in the remainder of this tutorial section. After following the instructions below for the analysis of SAMPLE.DAT, you apply the same analysis to the data file which was uploaded from your 556 MPS to assure that you are familiar with the basic features and capabilities of EcoWatch for Windows.

To start the analysis of the SAMPLE.DAT file, note that a shortened menu

bar is visible and many of the tools in the toolbar appear dimmed or “grayed out” before any file is opened (see below).

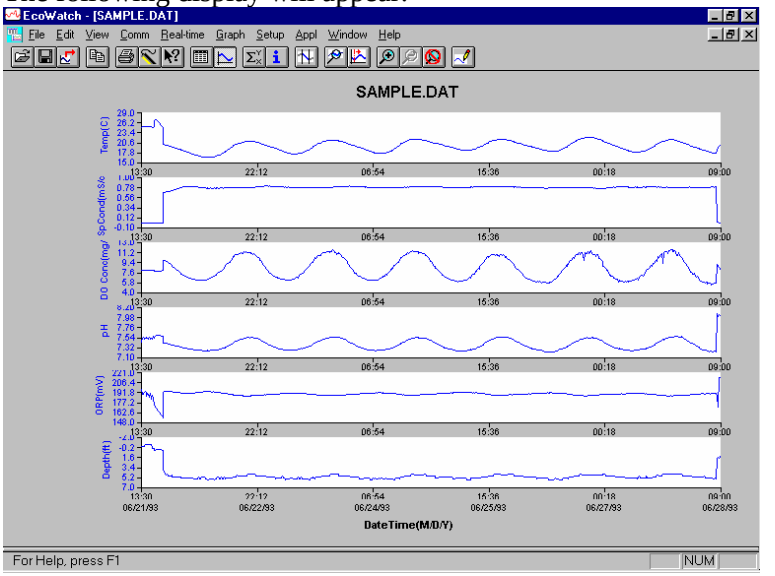


Full activation of EcoWatch features will be realized after a file is opened.

To open the sample data file:

1. Click the **File** menu button in the toolbar.
2. Select the **SAMPLE.DAT** file.
3. Click **OK** to open the file.

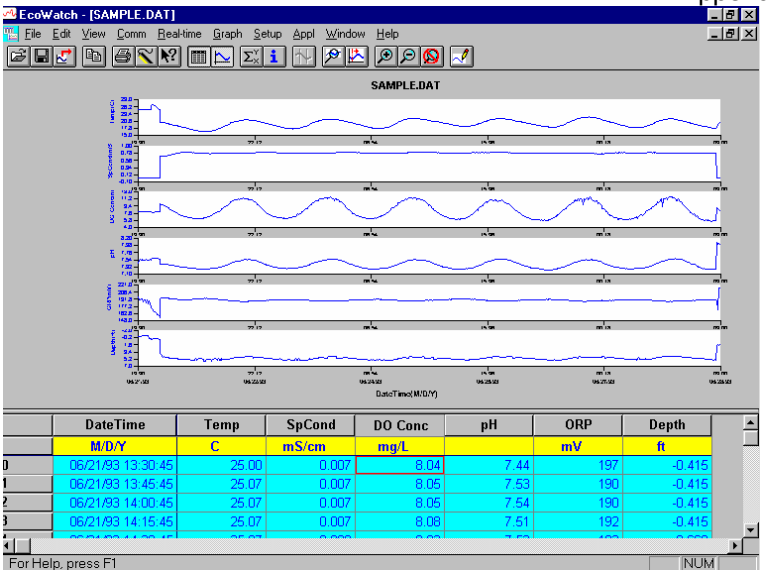
The following display will appear:



Note that the data in this file appears as a graph of temperature, specific conductance, dissolved oxygen, pH, ORP, and depth, all versus time. The graphs are scaled automatically so that all data fits comfortably on the computer screen. Note also that this data file was obtained with a 6-series sonde for which a depth sensor is available. Depth is NOT a current parameter for the 556 MPS.

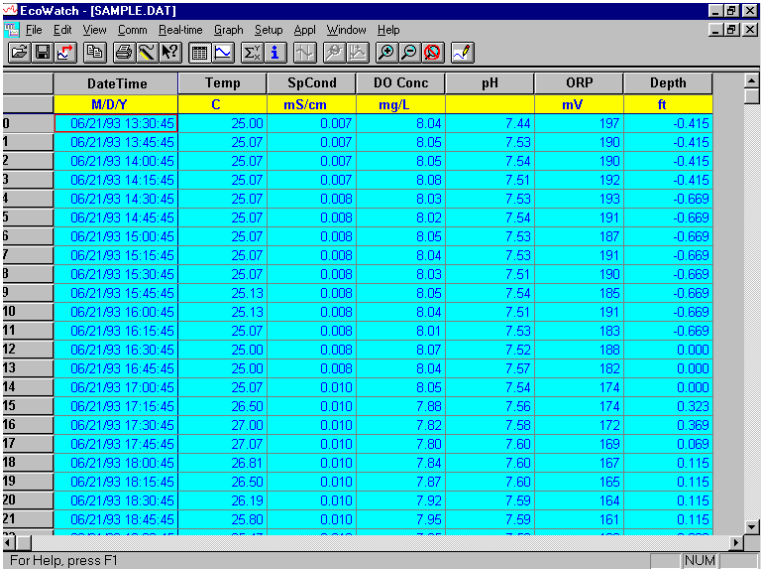
The **Table** and **Graph** buttons on the toolbar are on/off switches that are used to display or hide the graph and table pages respectively. When displaying a graph and a table at the same time, you can control the relative size of the two pages by placing the cursor over the small bar that separates them and

then dragging it to the desired location. Click the **Table** button to generate the following dual display of data.



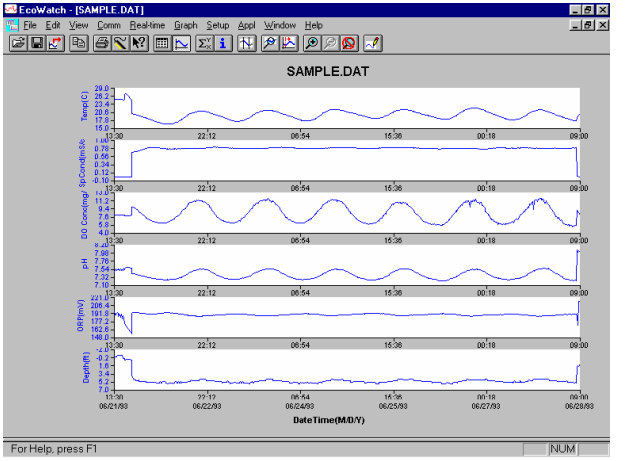
	DateTime	Temp	SpCond	DO Conc	pH	ORP	Depth
	M/D/Y	C	mS/cm	mg/L		mV	ft
0	06/21/93 13:30:45	25.00	0.007	8.04	7.44	197	-0.415
1	06/21/93 13:45:45	25.07	0.007	8.05	7.53	190	-0.415
2	06/21/93 14:00:45	25.07	0.007	8.05	7.54	190	-0.415
3	06/21/93 14:15:45	25.07	0.007	8.08	7.51	192	-0.415

Now click the **Graph** button (turn it off) to display only a report of your data as shown below. Note that the size of the report can be varied by clicking on the and buttons in the Toolbar.

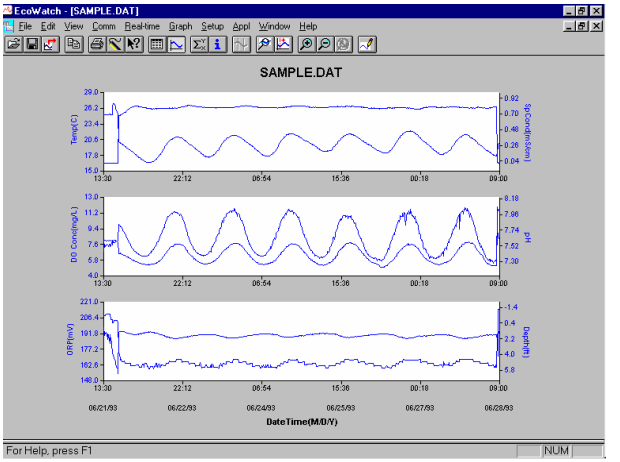


	DateTime	Temp	SpCond	DO Conc	pH	ORP	Depth
	M/D/Y	C	mS/cm	mg/L		mV	ft
0	06/21/93 13:30:45	25.00	0.007	8.04	7.44	197	-0.415
1	06/21/93 13:45:45	25.07	0.007	8.05	7.53	190	-0.415
2	06/21/93 14:00:45	25.07	0.007	8.05	7.54	190	-0.415
3	06/21/93 14:15:45	25.07	0.007	8.08	7.51	192	-0.415
4	06/21/93 14:30:45	25.07	0.008	8.03	7.53	193	-0.669
5	06/21/93 14:45:45	25.07	0.008	8.02	7.54	191	-0.669
6	06/21/93 15:00:45	25.07	0.008	8.05	7.53	187	-0.669
7	06/21/93 15:15:45	25.07	0.008	8.04	7.53	191	-0.669
8	06/21/93 15:30:45	25.07	0.008	8.03	7.51	190	-0.669
9	06/21/93 15:45:45	25.13	0.008	8.05	7.54	185	-0.669
10	06/21/93 16:00:45	25.13	0.008	8.04	7.51	191	-0.669
11	06/21/93 16:15:45	25.07	0.008	8.01	7.53	183	-0.669
12	06/21/93 16:30:45	25.00	0.008	8.07	7.52	188	0.000
13	06/21/93 16:45:45	25.00	0.008	8.04	7.57	182	0.000
14	06/21/93 17:00:45	25.07	0.010	8.05	7.54	174	0.000
15	06/21/93 17:15:45	26.50	0.010	7.88	7.56	174	0.323
16	06/21/93 17:30:45	27.00	0.010	7.82	7.58	172	0.369
17	06/21/93 17:45:45	27.07	0.010	7.80	7.60	169	0.069
18	06/21/93 18:00:45	26.81	0.010	7.84	7.60	167	0.115
19	06/21/93 18:15:45	26.50	0.010	7.87	7.60	165	0.115
20	06/21/93 18:30:45	26.19	0.010	7.92	7.59	164	0.115
21	06/21/93 18:45:45	25.80	0.010	7.95	7.59	161	0.115

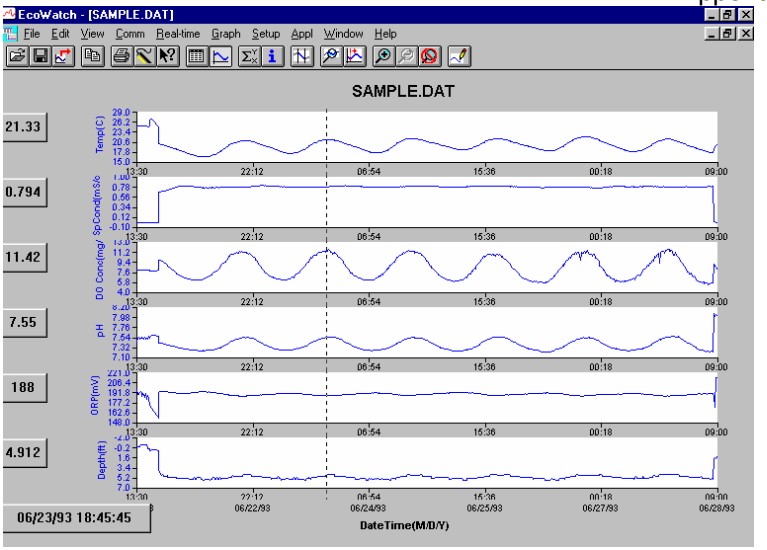
Now return to the original graphic display by toggling the **Table** button “off” and **Graph** button “on”.



From the **Setup** menu, click **Graph**. Click **2 Traces per Graph** and notice that the parameters are now graphed in pairs for easy comparison of parameters.

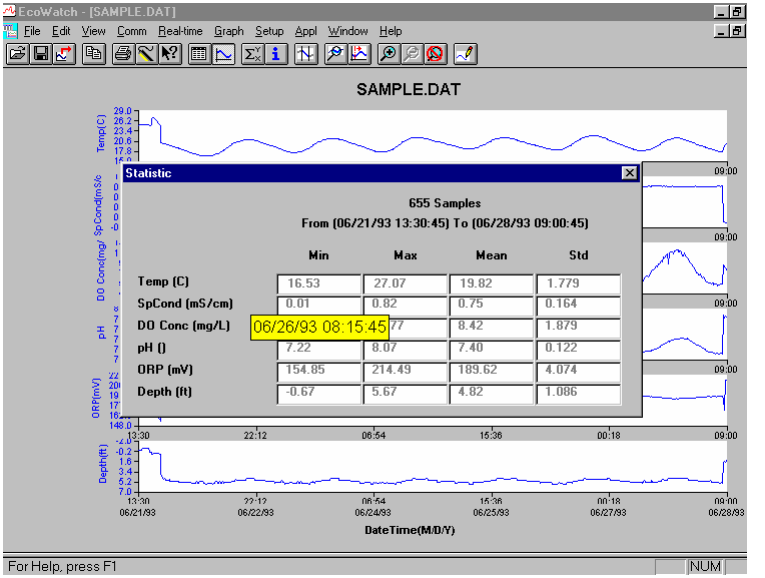


Click **1 Trace per Graph** to return the display to the original setting. Move the cursor to any position in the graph, then click and hold the right mouse button.



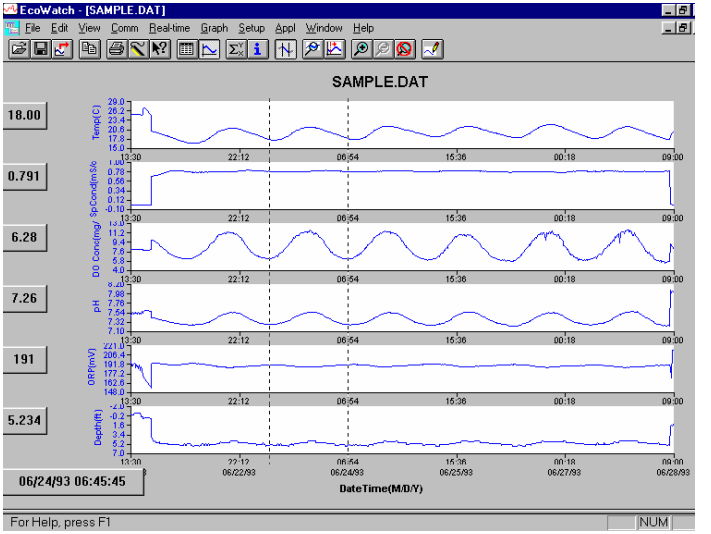
Note that the exact measurements for this point in time are displayed to the left of the graph. While holding down the right mouse button, move to another area on the graph. Notice how the measurements change as you move. When you release the mouse button, the display returns to normal.

To view statistical information for the study, click the **Statistics** button on the toolbar. On the statistics window, click on any min or max value to display the time when it occurred.

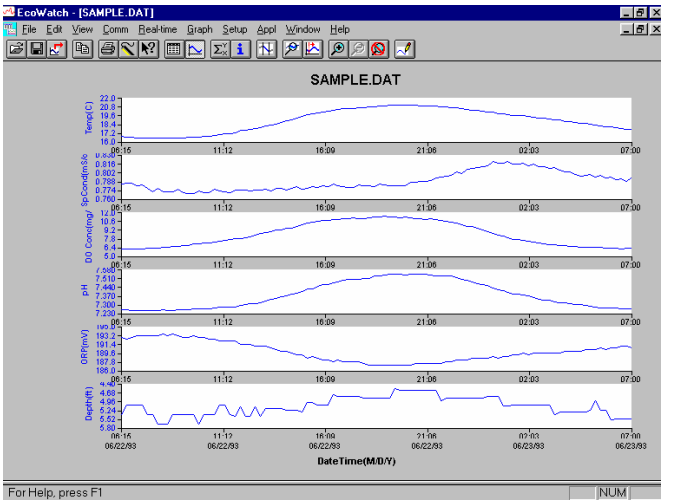


After viewing statistics, click the “x” at the upper right to close the window and return to the normal display.

Now click on the delimiter icon in the toolbar and then move the displayed icon to the graph. Click at the two points shown by dotted lines in the display below, being sure that the first click is to the left of the second.

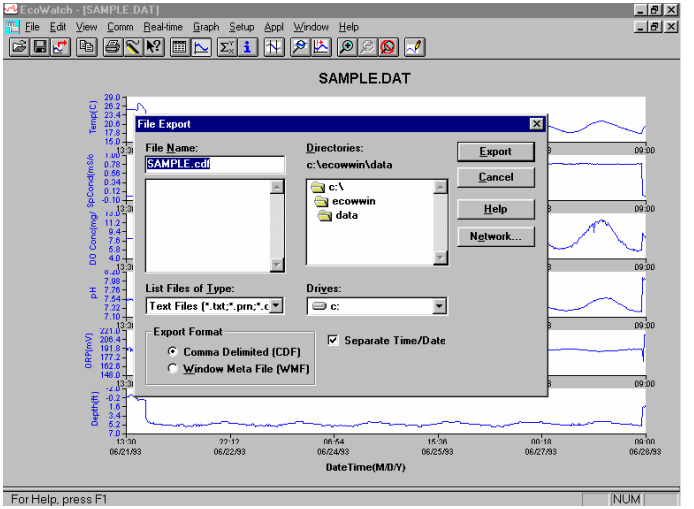


The data between the two selected points will then be graphed in higher resolution as shown below.

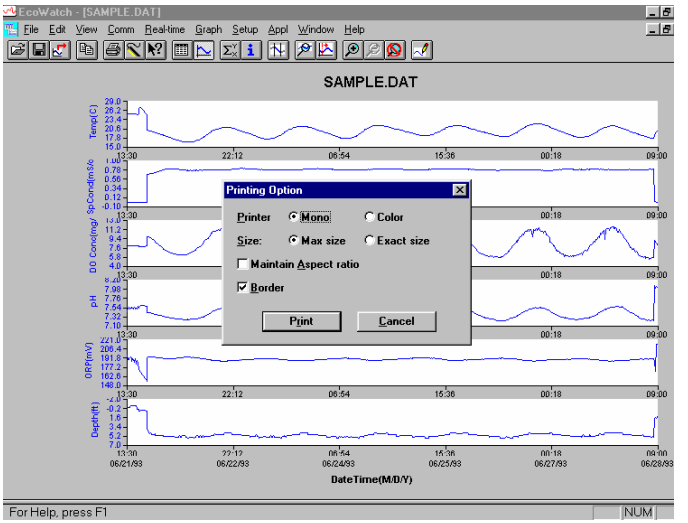


To return to the complete data set, select **Graph** from the toolbar and then click **Cancel Limits**.

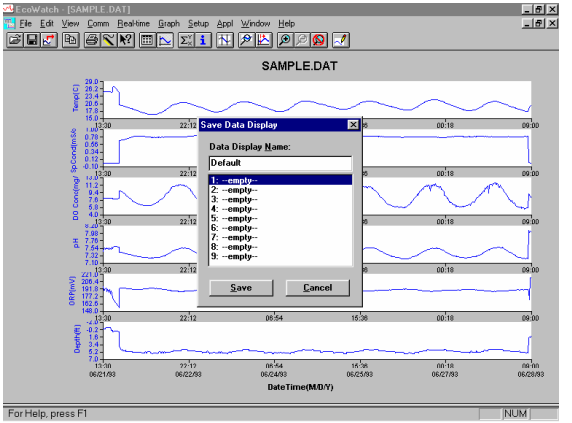
Now select the icon from the Toolbar to create a new data file which will allow your data to be imported into spreadsheets. Select the default export settings for a Comma Delimited File (.CDF) and click OK. A new spreadsheet-importable file (SAMPLE.CDF) is now present in the same folder as the SAMPLE.DAT file.



Now select the icon from the toolbar to print the plot. Accept the default settings and click OK to complete the printing operation.



Finally, end the tutorial by saving the **Data Display** in the format shown. From the File menu, click **Save Data Display**.



Then type “Default” for the file name and click **Save**. The parameters, colors, format, and x-axis time interval associated with the current display are now saved and can be accessed any time in the future. Nine different data displays may be saved for any data file. You can easily switch between various displays of the data. The data files can be accessed by clicking **Load Data Display** from the file menu and then selecting the desired presentation.

20.2.1 Summary of Toolbar Capability

The EcoWatch toolbar includes buttons for some of the most common commands in EcoWatch, such as **File Open**. To display or hide the toolbar,

open the **View** menu and click on the **Toolbar** command. A check mark appears next to the menu item when the toolbar is displayed.

The toolbar is displayed across the top of the application window, below the menu bar.

Click to:

Open an existing data file (.DAT). EcoWatch displays the **Open** dialog box, in which you can locate and open the desired file.

Save the working Data Display of the active data file. EcoWatch displays the **Save Data Display** dialog box in which you can overwrite existing Data Display or save to a new one.

Export data as a graph in Window Meta File (.WMF) format or as data in Comma Delimited (.CDF) format.

Copy the whole graph page or data from the selection on the table to the clipboard.

Print the active graph page or table page depending on which one is currently active.

Open a new terminal window to communicate with the sonde.

Access context sensitive help (Shift+F1).

Toggle table window during file processing.

Toggle graph window during file processing.

Display study statistics.

Display study info.

Limit the data to be processed.

Enlarge a selective portion of graph.

Center the graph under the cursor.

Enlarge graph of table 20%.

Reduce graph of table 20%.

Return graph or table to its normal size (unzoom).

Redraw the graph.

20.2.2 Other capabilities

The above tutorial and function list for the toolbar provide basic information to allow you to view and analyze the field data which was stored in your 556 MPS. Some of the other commonly used capabilities of EcoWatch which the user may want to explore are listed below:

- Customize the units for each parameter, e.g., report uS/cm instead of mS/cm for conductivity.
- Customize the order of parameters in each plot or report.
- Customize the colors and fonts of each data display.
- Manually scale the y-axis sensitivity for each parameter.
- Merging of two or more data files with compatible parameter formats
- View information about the study such as number of points, instrument serial number, etc. which was stored in the 556 with the data.
- Print data reports in different statistical formats.
- Create plots of parameter vs. parameter rather than parameter vs. time.

These additional features of EcoWatch for Windows are explained in detail in the YSI 6-series manual (which can be downloaded at no cost from the YSI Web Site as described above) and the Help selection in the EcoWatch menu bar. To purchase a hard copy of the 6-series manual, contact YSI Customer Service using the contact information in *Appendix E Customer Service*.

21. Appendix H Calibration Record Information

When your YSI 556 MPS sensors are initially calibrated, relevant information about the sensors will be stored in a separate file in the YSI 556 MPS memory.

NOTE: This file, by default, will have the name "556 Circuit Board Serial Number.glp." The circuit board serial number is assigned at the factory and has a hexadecimal format such as 000080A4. Thus the default calibration record file would be designated 00080A4.glp. Refer to Section *10.7 GLP Filename* to change the filename.

The information in the calibration record will track the sensor performance of your instrument and should be particularly useful for programs operating under Good Laboratory Practices (GLP) protocols.

21.1 Viewing the Calibration Record (.glp) File

NOTE: Make certain that you have performed a calibration on at least one of the sensors associated with your YSI 556 MPS.

Follow the procedures outlined in Section *8.3 View File*.

21.2 Uploading the Calibration Record (.glp) File

NOTE: Make certain that you have performed a calibration on at least one of the sensors associated with your YSI 556 MPS.

Follow the procedures outlined in Section *8.4 Upload to PC*.

21.3 Understanding the Calibration Record (.glp) File

1. Open a calibration record file. Refer to Section 8.3 View File.
2. Use the arrow keys to scroll horizontally and/or vertically to view all the data.

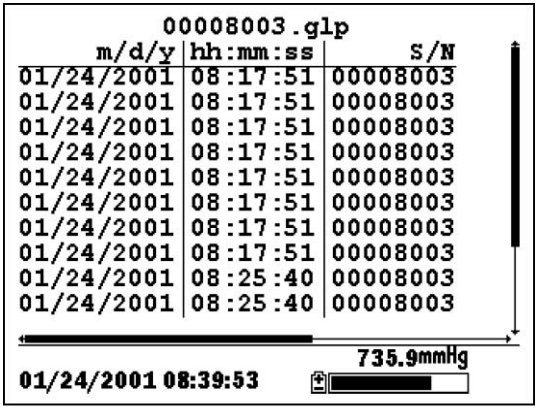


Figure 21.1Calibration Record Screen 1

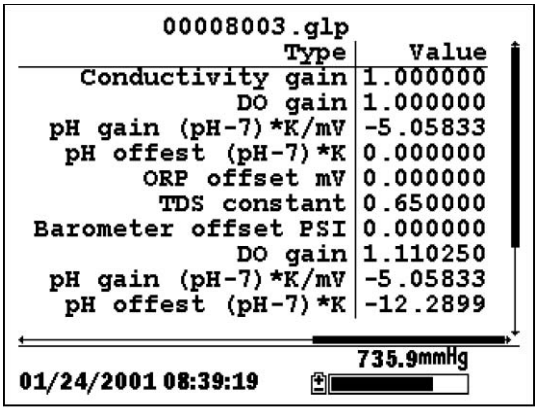


Figure 21.2 Calibration Record Screen 2

NOTE: Each sensor (not parameter) is characterized by either 1 line (Conductivity, Dissolved Oxygen, ORP, TDS, or Barometer (Optional)) or 2 lines (pH) of calibration documentation.

The left hand portion of each calibration entry shows the date and time that a calibration of a particular sensor was performed. In addition, each calibration entry is characterized by the instrument serial number, as defined by YSI. See Figure 21.1 Calibration Record Screen 1. The right hand portion shows the YSI designation of the calibration constants and their values after their calibration has been performed. A more detailed description of the calibration constants is provided below:

- **Conductivity Gain** – A relative number which describes the sensitivity of the sensor. Basically, the value represents the calculated cell constant divided by the typical value of the cell constant ($5\ cm^{-1}$).
- **DO Gain** – A relative number which describes the sensitivity of the sensor. Basically, the value represents the sensor current at the time of calibration divided by the typical value of the sensor current (15 uA).
- **pH Gain** – A number which basically represents the sensitivity of the pH sensor. To remove the effect of temperature on the slope of the relationship of probe output in mv versus pH, the value of pH/mv is multiplied by the temperature in degrees Kelvin (K).
- **pH Offset** – A number which basically represents the offset (or intercept) of the relationship of probe output in mv versus pH, the value of pH is multiplied by the temperature in degrees Kelvin (K).

Anytime you perform a calibration, information concerning the calibration constants will be logged to the Calibration Record file (.glp file). However, if the **Delete All Files** command is used, Refer to Section *8.6 Delete All Files*, the Calibration Record file will also be lost. It is critical that this file should be uploaded to your PC prior to issuing a **Delete All Files** command. Refer to Section *8.4 Upload to PC*.

YSI Environmental
1700/1725 Brannum Lane
Yellow Springs, OH
45387 USA
937.767.7241
937.767.9353 fax
environmental@YSI.com
www.YSI.com

Item # 655279
Rev D
Drawing # A655279
August 2009
©2009 YSI Incorporated